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GAMES WITHOUT FRONTIERS: THE INCREASING IMPORTANCE OF INTELLECTUAL PROPERTY RIGHTS IN THE PEOPLE'S REPUBLIC OF CHINA

James M. Cooper†

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I. Introduction

Intellectual property ("IP") protection in China has been murky and amorphous. The country is currently enjoying a historic era with significant infrastructure and investment projects occurring as the Chinese consumer society substantially expands. These simultaneous trends require that China commit to the securitization and protection of IP rights to sustain its rapid economic growth. The country has delivered statements purporting commitment to do better and support IP rights, but the actions of the Chinese government around IP rights tell a different story. China's ultimate decision in this area will determine the trajectory of the country's future and position on the world stage regarding intellectual property rights ("IPR").

While IP rights have existed for centuries, ¹ IP protection has increased in importance with post-industrialization: the societal transition from a manufacturing-based economy to a knowledge- and services-based economy. ² According to the International Chamber of Commerce,

[IPR]—the copyrights, patents, trademarks and similar rights upon which the lion's share of creative and innovative products and services rely—have a vital role in growing the economies of developed and developing countries all over the world, in spurring innovation, in giving large and small firms a range of tools to help drive their success, and in benefitting consumers and society through a continuous stream of innovative, competitive products and services and an expansion of society's overall state of knowledge.³

Similarly, the World Intellectual Property Organization ("WIPO") also affirmed that "[i]ndustrial property has long been recognized and used by industrialized countries, and is being used by an ever increasing number of developing countries, as an important tool of technological and economic development." And furthermore, a study commissioned

¹ Irene Kosturakis, *Intellectual Property 101*, 46 TEX. J. Bus. L. 37, 38 (2014).

² Julie E. Cohen, *What Kind of Property Is Intellectual Property?*, 52 Hous. L. Rev. 691, 698 (2014).

³ ALLEN N. DIXON, INT'L CHAMBER OF COM., INTELLECTUAL PROPERTY: POWERHOUSE FOR INNOVATION AND ECONOMIC GROWTH 2 (2011).

⁴ WORLD INTELL. PROP. ORG. [WIPO], WIPO INTELLECTUAL PROPERTY HANDBOOK 164 (2d ed. 2004), https://www.wipo.int/edocs/pubdocs/en/intproperty/489/wipo_pub_489.pdf.

by the United Nations Industrial Development Organization reported that:

[D]eveloped countries, with many potential innovators, have tended to opt for relatively strong IPR systems, with the aim of encouraging inventive and creative activities that are seen as an important source of long-run economic growth. With [research and development ("R&D")] spending concentrated in a handful of the world's richest countries, genuinely innovative activities are limited in most developed and developing countries. The majority of countries in the world have taken a different approach, providing only weak IPR protection, if any, as a way of allowing the rapid diffusion of knowledge through imitation as a significant source of technological development.⁵

The People's Republic of China ("China" or "PRC") favored the latter approach until recently.⁶ For years, China was known as the "Pirate Nation." Indeed, part of China's strategy over the years has

[T]he larger truth is that the Chinese economy has staked a great deal on its counterfeiters. They provide the people with affordable goods. . . . The counterfeiters give China's growing number of globally competitive companies the means to compete with powerful foreign rivals who are forced to pay full fare for proprietary technologies.

⁵ ROD FALVEY & NEIL FOSTER, UNITED NATIONS INDUS. DEV. ORG., THE ROLE OF INTELLECTUAL PROPERTY RIGHTS IN TECHNOLOGY TRANSFER AND ECONOMIC GROWTH: THEORY AND EVIDENCE, at vii–viii (2006), https://www.unido.org/sites/default/files/2009-04/Role_of_intellectual_property_rights_in_technology_transfer_and_economic_growth_0.pdf.

⁶ The ubiquity of copycats (pirates, counterfeiters, etc.) has been viewed as a consequence of the preference of some Chinese for flexibility; in addition, it is attributed to a lack of innovation consciousness. And while few countries fight counterfeiting as vigorously as China, the effect of cracking down on counterfeiting year after year has not been significant. Wang Jun (王軍), Zhongguo Shanzhai Wenhua Wei He Shengxing? (中國山寨文化為何盛行?) [Why is China's Copycat Culture Rampant?], Jinrong Shibao (金融時報) [FIN. TIMES] (Aug. 27, 2012, 6:12 PM), http://www.ftchinese.com/story/001046229?full=y&archive; cf. Tania Branigan, Does China Deserve the Reputation as the Land of Copycats?, GUARDIAN (Oct. 15, 2016, 2:00 AM), https://www.theguardian.com/world/2016/oct/15/chinareputation-copycats-pelamis-intellectual-property. See generally Jack Carlson, China's Copycat Cities, FOREIGN POL'Y (Nov. 29, 2012, 4:57 PM), https://foreignpolicy.com/2012/11/29/chinas-copycat-cities/.

⁷ In a chapter titled "Pirate Nation," Fishman explains this nickname:

been the outright theft of Western innovation⁸ and China's acquisition of innovation through mandatory technology transfer from Western companies to Chinese partners⁹ as part of the PRC's Joint Venture Law.¹⁰ Developed countries have long cautioned government leaders

TED C. FISHMAN, CHINA, INC. 236 (2006); see Alexandra Harney, Opinion, China's Copycat Culture, N.Y. TIMES: LATITUDE (Oct. 31, 2011, 11:37 PM), https://latitude.blogs.nytimes.com/2011/10/31/chinas-copycat-culture/; see also Austin Williams, The Origins of China's Copycat Culture, GLOB.: INT'L BRIEFING, https://www.global-briefing.org/2014/01/the-origins-of-chinas-copycat-culture/ (last visited Oct. 25, 2021).

⁸ Mark Ward, *Does China's Government Hack US Companies to Steal Secrets?*, BBC News (Sept. 23, 2015), https://www.bbc.com/news/technology-34324252; *see also* Kim Zetter, *US and China Reach Historic Agreement on Economic Espionage*, WIRED (Sept. 25, 2015, 3:16 PM), https://www.wired.com/2015/09/us-china-reach-historic-agreement-economic-espionage/; Rowena Mason, *Xi Jinping State Visit: UK and China Sign Cybersecurity Pact*, GUARDIAN (Oct. 21, 2015, 12:13 PM), https://www.theguardian.com/politics/2015/oct/21/uk-china-cybersecurity-pact-xi-jinping-david-cameron.

⁹ "China needs to refrain from forcing or pressuring technology transfer, make fundamental structural changes to strengthen [IP] protection and enforcement, implement recent revisions to its IP measures, open China's market to foreign investment, and allow the market a decisive role in allocating resources." U.S. TRADE (2020),REPRESENTATIVE, 2020 SPECIAL 301 REPORT 39 https://ustr.gov/sites/default/files/2020 Special 301 Report.pdf; Dan cf. Prud'homme, 3 Myths About China's IP Regime, HARV. BUS. REV. (Oct. 24, 2019), https://hbsp.harvard.edu/product/H058EW-PDF-ENG ("I have found that the most egregious Chinese policies coercing technology transfer do not appear to be commonly faced by foreign firms in recent years.").

¹⁰ On July 1, 1979, the Second Session of the Fifth National People's Congress adopted *The Law of the People's Republic of China on Joint Ventures Using Chinese and Foreign Investment*, 18 I.L.M. 1163 (1979) [hereinafter *Joint Venture Law*]. The law became effective on July 8, 1979. *Id.* For an English translation, see *Daily Report: People's Republic of China*, FOREIGN BROADCAST INFORMATION SERVICE (FBISCHI), FBIS-CHI-79-146 Supp. 019, July 27, 1979, and FBIS-CHI-79-147 Supp. 020, July 30, 1979. On September 20, 1983, the State Council promulgated *Regulations for the Implementation of the Law of the People's Republic of China on Joint Ventures Using Chinese and Foreign Investment.* 22 I.L.M. 1033 (1983). These regulations provide the following articles:

Article 25. Each participant to a joint venture may contribute cash or buildings, premises, equipment or other materials, industrial property, know-how, right to the use of a site as investment, the value of which shall be ascertained. If the investment is in the form of buildings, premises, equipment or other materials, industrial property or known-how, the prices shall be ascertained through consultation by the parties to the joint venture on the basis of fairness and reasonableness, or evaluated by the third party agreed upon by parties to the joint venture.

. . . .

about national security concerns over largescale Chinese IP theft, and Chinese companies have long reaped benefits from the lack of IP rights enforcement by Chinese authorities.¹¹ As an example, the Center for Responsible Enterprise and Trade and PricewaterhouseCoopers have reported that trade secret theft is between one and three percent of GDP,¹² meaning that the cost to an \$18 trillion United States ("U.S.") economy is between \$180 billion and \$540 billion.

For years, the U.S. government complained openly about Chinese efforts to steal U.S. IP—including patents, trade secrets, trademarks, and copyrights—by both state-sponsored and private actors.¹³ Such a strategy played a role in China's rising economic and geopolitical importance since it opened its door to the world starting in 1979.¹⁴

Article 28. The industrial property or know-how contributed by the foreign participant as investment shall meet one of the following conditions:

Article 29. Foreign participants who contribute industrial property or know-how as investment shall present relevant documentation on the industrial property or know-how, including photocopies of the patent certificates or trademark registration certificates, statements of validity, their technical characteristics, practical value, the basis for calculating the price and the price agreement signed with the Chinese participants. All these shall serve as an annex to the contract.

Id. at 1037. But these regulations and the Joint Venture Law were both invalidated by the Foreign Investment Law of the People's Republic of China (issued on Mar. 15, 2019, and effective on Jan. 1, 2020), and the accompanying regulations for that law (issued on Dec. 26, 2019, and effective on Jan. 1, 2020). Nanda Lau & Karen Ip, China Set to Implement the New Foreign Investment Law, LEXOLOGY (Jan. 10, 2020), https://www.lexology.com/library/detail.aspx?g=7965cc38-5837-47b9-9630-dfa9c1c1e7ec.

⁽¹⁾ Capable of manufacturing new products urgently needed in China or products suitable for export;

⁽²⁾ Capable of improving markedly the performance quality of existing products and raising productivity;

⁽³⁾ Capable of notable savings in raw materials, fuel or power.

¹¹ See generally Center for Responsible Enterprise and Trade & PricewaterhouseCoopers, Economic Impact of Trade Secret Theft: A Framework for Companies to Safeguard Trade Secrets and Mitigate Potential Threats (2014), https://www.innovation-asset.com/hubfs/blog-files/CREATe.org-PwC-Trade-Secret-Theft-FINAL-Feb-2014_01.pdf.

¹² *Id*. at 3

¹³ Eric Rosenbaum, *1 in 5 Corporations Say China Has Stolen Their IP Within the Last Year: CNBC CFO Survey*, CNBC: CFO COUNCIL (Mar. 1, 2019, 10:21 AM), https://www.cnbc.com/2019/02/28/1-in-5-companies-say-china-stole-their-ip-within-the-last-year-cnbc.html.

¹⁴ See Shang-Jin Wei, The Open Door Policy and China's Rapid Growth: Evidence from City-Level Data, in 4 GROWTH THEORIES IN LIGHT OF THE EAST ASIAN

Cyber attacks, corporate espionage, and forced technology transfers have all been part of the Chinese playbook to steal U.S. trade secrets and other IP for the last several decades. Even though former U.S. President Barack Obama and Chinese President Xi Jinping reached a U.S.-China Cyber Agreement in 2015, Chinese cyber attacks and violations of U.S. companies IP rights continued after the agreement was reached. Consequently, the United States Trade Representative ("USTR") continued to name and shame Chinese violators by routinely placing China on the Priority Watch List of countries that do not respect U.S. IP rights holders. In its 2018 report, looking back on 2017, the USTR concluded:

[T]he state of [IP] protection and enforcement in China, and market access for U.S. persons that rely on IP protection, reflect the country's failure to implement promises to strengthen IP protection, open China's market to foreign investment, allow the market a decisive role in allocating resources, and refrain from government interference in private sector technology transfer decisions.¹⁹

Other organs of the U.S. government concurred. For example, in 2020 the U.S. Department of Justice opined, "China is predominantly responsible for the theft of U.S. intellectual property." In a major government report in 2020, former U.S. President Donald J. Trump concluded that "[a] more powerful and emboldened China is increasingly asserting itself by stealing our technology and intellectual property in an effort to erode United States economic and military

EXPERIENCE 73, 73 (Takatoshi Ito and Anne O. Krueger, eds., University of Chicago Press 1995), https://www.nber.org/system/files/chapters/c8545/c8545.pdf.

¹⁵ THE COMM'N ON THE THEFT OF AMERICAN INTELL. PROP., IP COMMISSON 2019 REVIEW 3 (2019), http://www.ipcommission.org/report/ip_commission_2019_review of progress and updated recommendations.pdf.

¹⁶ CONG. RSCH. SERV., IN10376, U.S.-CHINA CYBER AGREEMENT 1 (2015).

¹⁷ Nicole Perlroth, *How China Transformed into a Prime Cyber Threat to the U.S.*, N.Y. TIMES (July 20, 2021), https://www.nytimes.com/2021/07/19/technology/china-hacking-us.html.

¹⁸ U.S. TRADE REPRESENTATIVE, 2018 SPECIAL 301 REPORT 38 (2018), https://ustr.gov/sites/default/files/files/Press/Reports/2018%20Special%20301.pdf.

David H. Laufman et al., *The Department of Justice's National Security Division Chief Addresses China's Campaign to Steal U.S. Intellectual Property*, NAT'L L. REV. (Aug. 24, 2020), https://www.natlawreview.com/article/department-justice-s-national-security-division-chief-addresses-china-s-campaign-to (reporting on the public talk by John Demers, the head of the National Security Division at the Department of Justice).

superiority." ²¹ Such a statement came as no surprise given that President Trump claimed China was responsible for "the greatest theft in the history of the world" while a presidential candidate in 2016.²²

However, this narrative has become more complex as China refocused from an importer of IP to an exporter of IP in the last decade, thereby shifting the international geopolitics of innovation. In 2018, China received more patent applications than the U.S., the European Union ("EU"), Japan, and South Korea combined.²³ Nor has it taken China very long to significantly shift the international politics around innovation. In 2012, for the first time, China topped the ranking for both the source (filings by China) and the destination (filed in China).²⁴ Out the top five national IP offices, the State Intellectual Property Office of the People's Republic of China ("SIPO") was alone in recording "double-digit growth for each of the three types of IP mentioned."²⁵ Continuous growth of registrations in China has been the main driver of global IP growth over the last several years:

[SIPO] received the most applications in 2015 and became the first office to receive more than a million applications in a single year...SIPO—with 1,101,864 filings—received almost as many applications as the combined total for the JPO (318,721), KIPO (213,694) and the USPTO (589,410). The EPO received 160,028 applications. Together, the top five offices accounted for 82.5% of the world total in 2015, which was considerably higher than their combined share in 2000 (70.4%). The four BRIC countries—Brazil, China, India and the Russian Federation—rank among the top 10 offices.²⁶

WIPO has also noted that "[d]ue to the high numbers of applications filed in China, the offices of upper middle-income countries have seen

NAT'L COUNTERINTELLIGENCE & SEC. CTR., NATIONAL COUNTERINTELLIGENCE STRATEGY OF THE UNITED STATES OF AMERICA 2020-2022, at I (2020), https://www.dni.gov/files/NCSC/documents/features/20200205-National CI Strategy 2020 2022.pdf.

²² Trump Accuses China of 'Raping' US with Unfair Trade Policy, BBC NEWS (May 2, 2016), https://www.bbc.com/news/election-us-2016-36185012.

²³ Andreas Becker, *China Flexes its Patent Muscle*, DW AKADEMIE (Mar. 7, 2018), https://www.dw.com/en/china-flexes-its-patent-muscle/a-42872310.

WIPO, WORLD INTELLECTUAL PROPERTY INDICATORS 5 (2013), http://www.wipo.int/edocs/pubdocs/en/intproperty/941/wipo_pub_941_2013.pdf.
25 Id.

²⁶ WIPO, WORLD INTELLECTUAL PROPERTY INDICATORS 21 (2016), http://www.wipo.int/edocs/pubdocs/en/wipo pub 941 2016.pdf.

their combined share of the world total increase from 16.5% in 2005 to 43.5% in 2015. SIPO accounted for 87.7% of the upper middle-income group total."²⁷ This trend has continued for the last half decade. For instance, according to the 2020 Global Innovation Index Report released by WIPO, "China ranked 14th, up 15 places from 2015."²⁸ China's total "import and export of intellectual property royalties was US\$46.31 billion, of which exports were US\$8.68 billion, a year-on-year increase of 31.5%."²⁹

This Article explores two factors driving the increased importance of IP rights protection for China in the last decade. The first factor is the geopolitical competition for dominance in strategic industries that is underway between the U.S. and China.³⁰ The second is the exponential growth of China's consumer society. Both of these are two major drivers of the growing importance of IP rights protections in China today, and this Article addresses the challenges they present to China's international and domestic IP strategy.

The first factor, the geopolitical competition between the U.S. and China for dominance in strategic industries, has always existed in the countries' relationship. However, in the last few years China has made substantial strides establishing itself as a key player in significant worldwide industries. On May 8, 2015, the State Council of the People's Republic of China launched the "Made in China 2025" initiative, aiming to transform China from a world factory of quantity to one of quality. ³¹ Chinese authorities have used state-owned

²⁷ *Id.* at 22.

²⁸ Cao Xiuying (曹秀英), Chen Zhang Yu: Jiaqiang Da Shuju He Rengong Zhineng Lingyu Zhishi Chanquan Baohu Shi Zai Bi Xing (沉長宇:加強大數據和人工智能領域知識產權保護勢在必行) [Shen Changyu: It is Imperative to Strengthen Intellectual Property Protection in the Field of Big Data and Artificial Intelligence], Renmai Wangluo (人民网) [PEOPLE.CN] (Apr. 26, 2021, 8:18 AM), http://finance.people.com.cn/n1/2021/0426/c1004-32087942.html.

²⁹ Id

³⁰ "President Biden and many members of Congress rightly view the United States and other democratic, market-based countries as being locked in competition with China and other authoritarian, state-led nations over whose values and norms will prevail in an increasingly diverse world." Joanna Shelton, *The CPTPP and Intellectual Property Rights Protection*, CTR. FOR STRATEGIC & INT'L STUD. (June 28, 2021), https://www.csis.org/analysis/cptpp-and-intellectual-property-rights-protection.

^{31 &}quot;To achieve the strategic goal of a manufacturing power, we must adhere to problem-oriented, overall planning, and highlight the key points; we must build consensus from the whole society, accelerate the transformation and upgrading of manufacturing, and comprehensively improve the quality of development and core competitiveness." Guowuyuan Guanyu Yinfa "Zhongguo Zhizao 2025" De Tongzhi (國務院關於印發《中國製造2025》的通知) [Notice of the State Council on Printing and Distributing "Made in China 2025"], Zhengfu Wangluo (王政富)

enterprises ³² to place bets on national winners which can directly compete with big Western technology companies in many other future strategic industries like autonomous vehicles, blockchain, and robotics.³³ At a State Council Executive Meeting in 2017, Premier Li Keqiang emphasized that "[the Chinese] must give full play to the role of innovation in spurring entrepreneurship and employment, and speed up the transformation of innovation into real productivity."³⁴ As part of the Made in China 2025 initiative, many Chinese companies expanded their R&D investments into advanced technology spaces.³⁵ There is also a program to provide incentives to attract the best talent for employment with Chinese companies.³⁶ Procurement and enforcement

[GOV.CN] (May 8, 2015), http://www.gov.cn/zhengce/content/2015-05/19/content 9784.htm.

[C]hina's alternative digital universe now creates and captures oceans of new data about the real world. That wealth of information on users—their location every second of the day, how they commute, what foods they like, when and where they buy groceries and beer—will prove invaluable in the era of AI implementation. It gives these companies a detailed treasure trove of these users' daily habits, one that can be combined with deep-learning algorithms to offer tailor-made services ranging from financial auditing to city planning. It also vastly outstrips what Silicon Valley's leading companies can decipher from your searches, "likes," or occasional online purchases. This unparalleled trove of real-world data will give Chinese companies a major leg up in developing AI-driven services.

KAI-FU LEE, AI SUPERPOWERS: CHINA, SILICON VALLEY, AND THE NEW WORLD ORDER 17 (2018).

[T]he flow of high-level talents in colleges and universities should obey and serve . . . the major national development strategies such as . . . the "Belt and Road" initiative. The competition for talents

³² See generally Mark McLaughlin, State-Owned Enterprises and Threats to National Security Under Investment Treaties, 19 CHINESE J. OF INT'L L. 283 (2020).

³³ Scott Kennedy, *Made in China 2025*, CTR. FOR STRATEGIC & INT'L STUD. (June 1, 2015), https://www.csis.org/analysis/made-china-2025.

³⁴ Xu Wei (徐偉), Zhongguo Jinyibu Gaige Yi Qudong Chuangxin (中國進一步改革以驅動創新) [China to Further Reform to Drive Innovation], Zhengfu Wangluo (王政富) [GOV.CN], (Aug. 30, 2017, 8:25 PM), http://english.www.gov.cn/premier/news/2017/08/30/content_281475826050062.ht m.

³⁵ PETER FRANKOPAN, THE NEW SILK ROADS: THE PRESENT AND FUTURE OF THE WORLD 200 (2019) (stating that the Beijing government is "pouring money and resources into artificial intelligence," and "building new technology parks across the country"). In addition:

³⁶ The Office of the Ministry of Education has stated that gathering talent with an international focus is important to China:

of IP rights is paramount to protecting investments in talent and ensuring future domination of strategic industries.

The second factor for increased importance of IP rights protection is the growth of China's consumer society, which relies on a growing middle class as well as a basic set of public goods provided by the government that allow the middle class to flourish.³⁷ These public goods include the maintenance of public security, construction of safe roads, crime prevention, compliance with secure construction practices, and provision of other public services and infrastructure.³⁸ Consumer protection is also required—meaning enhanced product safety legislation and enforcement action—including consistent regulation for the safety of food and beverages, medicine, appliances, and other devices.³⁹ According to a study for the Brookings Institution,

[C]hina is experiencing the fastest expansion of the middle class the world has ever seen, during a period when the global middle class is already expanding at a

must have an international perspective . . . and pay attention to the introduction of high-level overseas talents. The "Changjiang Scholars Award Program" will continue to increase the focus on the introduction of high-level talents from overseas and the development of high-level talents from universities in the western and northeastern regions.

Jiaoyu Bu Bangongshi (教育部辦公室) [Office of the Ministry of Education], Jiaoyu Bu Bangong Ting Guanyu Jianchi Zhengque Yindao Cujin Gaoxiao Gao Cengci Rencai Heli You Xu Liudong Tongzhi (教育部辦公廳關於堅持正確引導促進高校高層次人才合理有序流動的通知) [Notice of the General Office of the Ministry of Education on Adhering to Correct Guidance and Promoting the Reasonable and Orderly Flow of High-level Talents in Colleges and Universities], Zhengfu Wangluo (政府网) [GOV.CN] (Jan. 25, 2017), http://www.moe.gov.cn/srcsite/A04/s7051/201701/t20170126 295715.html; cf. Off. OF THE SEC'Y OF STATE, THE ELEMENTS OF THE CHINA CHALLENGE 13 (2020), https://www.state.gov/wp-content/uploads/2020/11/20-02832-Elements-of-China-Challenge-508.pdf ("The [Chinese Communist Party] uses the Thousand Talents Program (TTP) and other party-run recruitment efforts to target universities and impel students and professors to obtain—lawfully or otherwise—technology, trade secrets, proprietary data, and research and development.").

³⁷ See generally Jim Tankersley, The 100% Economy: Why the U.S. Needs a Strong Middle Class to Thrive, ATLANTIC (May 18, 2012), https://www.theatlantic.com/business/archive/2012/05/the-100-economy-why-the-us-needs-a-strong-middle-class-to-thrive/257385/.

³⁸ See generally Dominic Barton, The Rise of the Middle Class in China and its Impact on the Chinese and World Economies, in US-CHINA 2022: ECONOMIC RELATIONS IN THE NEXT 10 YEARS (China-United States Exchange Foundation ed., https://www.chinausfocus.com/2022/wp-content/uploads/Part+02-Chapter+07.pdf.

³⁹ See Consumer-Protection Law, BLACK'S LAW DICTIONARY (11th ed. 2019).

historically unprecedented rate thanks in part to some of its neighbors like India. By 2027, we estimate that 1.2 billion Chinese will be in the middle class, making up one quarter of the world total.⁴⁰

Unsurprisingly, Goldman Sachs predicted that "[a]s more Chinese consumers gain purchasing power, their needs and preferences will have a powerful effect on the global economy."⁴¹

This proliferating consumer society coupled with China's growing military power are the major challenges of our time.⁴² China fostered much of the globe's economic growth in the post-2008 global recession.⁴³ After the initial economic hurdles of COVID-19, China's economy grew despite the initial economic slowdown earlier in 2020.⁴⁴ By the end of 2020, China's economy grew a reported 2.3% compared to the previous year.⁴⁵ Rapid and effective pandemic prevention and

[T]he Chinese Communist Party (CCP) will continue its whole-of-government efforts to spread China's influence, undercut that of the United States, drive wedges between Washington and its allies and partners, and foster new international norms that favor the authoritarian Chinese system. . . . China will maintain its major innovation and industrial policies because Chinese leaders see this strategy as necessary to reduce dependence on foreign technologies, enable military advances, and sustain economic growth and thus ensure the CCP's survival.

Id. at 6.

⁴⁰ HOMI KHARAS & MEAGAN DOOLEY, BROOKINGS INST., CHINA'S INFLUENCE ON THE GLOBAL MIDDLE CLASS 1 (2020), https://www.brookings.edu/wpcontent/uploads/2020/10/FP 20201012 china middle class kharas dooley.pdf.

⁴¹ The Rise of China's New Consumer Class, GOLDMAN SACHS, https://www.goldmansachs.com/insights/macroeconomic-insights/growth-of-china/chinese-consumer/ (last visited Oct. 26, 2021).

⁴² See generally DIR. OF NAT'L INTEL., ANNUAL THREAT ASSESSMENT OF THE U.S. INTELLIGENCE COMMUNITY (2021). This report specifically notes that:

⁴³ See Cong. Rsch. Serv., RL33534, China's Economic Rise: History, Trends, Challenges, and Implications for the United States 5 (2019).

⁴⁴ Mohammed Alardhi, *Rapid Growth in China Post-COVID Makes it Ripe for Investment*, WORLD ECON. F. (Jan. 18, 2021), https://www.weforum.org/agenda/2021/01/rapid-growth-china-post-covid-ripe-investment/.

Wending Guomin Jingji Zhuyao Mubiao Hao Yu Yuqi (2020年穩定國民經濟主要目標好於預期) [The Main Goal of the Stabilization of the National Economy in 2020 has Been Achieved Better than Expected], Zhengfu Wangluo (政府网) [Gov.cn] (Jan. 18, 2021), http://www.stats.gov.cn/english/PressRelease/202101/t20210118_1812432.html. But, the International Monetary Fund had predicted an annual growth rate of only 1.9% in 2020 and 7.9% in 2021 for

control measures helped China contain the epidemic, making the country the only major economy that achieved positive growth in 2020.⁴⁶ And while the almost two year trade war between China and the U.S.⁴⁷ slowed the rapid pace of growth that China experienced for three decades,⁴⁸ the Belt and Road initiative, detailed more in Part II, is designed to ensure long-term economic growth.⁴⁹

This Article focuses on the role of IP rights in China today. It does so by highlighting the transition China has made from "Pirate Nation" to global innovator in a mere few decades. Part II surveys the geopolitical policies—namely the Made in China 2025 and the Belt and Road initiative—that Beijing is pursuing for China's future development and influence. IP is a major underpinning for these policies. ⁵⁰ Part III of this Article explores China's shift from a manufacturing-driven economic growth strategy to a post-industrial (also known as knowledge-based) economic growth strategy and the key role that IP plays in this transition towards a consumption-based economy. Part IV examines the trends in IP rights filings in China and outside countries that are to the benefit of Chinese innovators. Part V of the Article concludes with a summary of the challenges facing China as it moves from a country of copycats to a leading global innovator. Much of that transition has been due to enhanced Chinese IP rights

China. *IMF Executive Board Concludes 2020 Article IV Consultation with the People's Republic of China*, INT'L MONETARY FUND (Jan. 8, 2021), https://www.imf.org/en/News/Articles/2021/01/06/pr211-china-imf-executive-board-concludes-2020-article-iv-consultation.

⁴⁶ Wang Jianing (王佳寧), Zhongguo Jingji Yinling Quanqiu Yiqing Fusu (中國經濟引領全球疫情復甦) [China's Economy Leads the Recovery in the Global Epidemic], Xinhua Wang (新華網) [XINHUANET] (Mar. 3, 2021, 5:34 PM), http://www.xinhuanet.com/fortune/2021-03/03/c_1127163657.htm. This growth may not be as robust as originally predicted. See Ryan Woo, Fitch Cuts China 2021 GDP Forecast to +8.1% vs +8.4% on Property Slowdown, REUTERS (Sept. 22, 2021, 10:53 PM), https://www.reuters.com/world/china/fitch-cuts-china-2021-gdp-forecast-81-vs-84-property-slowdown-2021-09-23/; see also James Palmer, Property Crisis Underpins China's Economic Slowdown, FOREIGN POL'Y (Oct. 20, 2021, 5:17 PM), https://foreignpolicy.com/2021/10/20/china-property-crisis-economic-slowdown/.

⁴⁷ James Cooper, *The Ugly Side of Reciprocity: The Trade War with United States' Partners Gets Hotter*, Bus. TIMES (July 5, 2018, 5:50 AM), https://www.businesstimes.com.sg/opinion/the-ugly-side-of-reciprocity-the-tradewar-with-the-united-states-partners-gets-hotter.

⁴⁸ Brad W. Setser, *China's Slowdown and the World Economy*, COUNCIL ON FOREIGN RELS. (Feb. 5, 2019, 12:16 PM), https://www.cfr.org/blog/chinas-slowdown-and-world-economy.

⁴⁹ Andrew Chatzky & James McBride, *China's Massive Belt and Road Initiative*, COUNCIL ON FOREIGN RELS. (Jan. 28, 2020, 7:00 AM), https://www.cfr.org/backgrounder/chinas-massive-belt-and-road-initiative.

⁵⁰ Cong. Rsch. Serv., IF11684, China's 14th Five-Year Plan: A First Look 1 (2021).

protection, which has long been an important factor in promotion of economic growth.⁵¹

II. THE BELT AND ROAD INITIATIVE AND THE IMPORTANCE OF INTELLECTUAL PROPERTY FOR CHINA

Chinese President Xi Jinping introduced China's "Silk Road Economic Belt" concept for the first time in September of 2013 during his visit to Kazahkstan.⁵² At the urging of President Xi, the National Development and Reform Commission, the Ministry of Foreign Affairs, and the Ministry of Commerce all jointly released a concrete action plan on the Belt and Road Initiative ("BRI"), also known as "One Belt One Road," ⁵³ on March 28, 2015. ⁵⁴ According to various legal and economic scholars, the BRI "is a developmental strategy promoted by the [PRC] to foster mercantile connectivity and cooperation among countries." ⁵⁵ The BRI "aims to promote the connectivity of Asian, European and African continents and their adjacent seas" by comprising land-based and maritime-based trade connections. ⁵⁶

Although the initiative is predominately percieved as President Xi's ambitious goal to build infrastructure connecting China's less-developed border regions with neighboring countries, it also "significantly influenced China's national [IP] strategy[.]" ⁵⁷ For

⁵¹ See FALVEY & FOSTER, supra note 5, at iii (stating that new evidence links "protection of IPRs to economic growth, innovation and technology diffusion").

⁵² Brenda Goh & John Ruwitch, *Pressure on as Xi's 'Belt and Road' Enshrined in Chinese Party Charter*, REUTERS (Oct. 24, 2017, 7:26 AM), https://www.reuters.com/article/us-china-congress-silkroad/pressure-on-as-xis-belt-and-road-enshrined-in-chinese-party-charter-idUSKBN1CT1IW ("First mentioned during a speech Xi gave to university students in Kazakhstan in 2013").

⁵³ "The very name, especially in its English translation, has caused confusion, evolving as it has from the New Silk Road to the BRI." Duncan Freeman, *The Belt and Road Initiative and the Overcapacity Connection, in* THE BELT AND ROAD INITIATIVE AND GLOBAL GOVERNANCE 120, 120 (Maria Adele Carrai et al. eds., 2020).

⁵⁴ Gong Jian "Yidai Yilu" De Yuanjing Yu Xingdong (共建 "一帶一路"的願景與行動) [Vision and Actions on Jointly Building Belt and Road], Zhongguo Wang (中國網) [CHINA.ORG.CN] (Mar. 28, 2015), http://www.china.org.cn/china/Off_the_Wire/2015-03/28/content_35182638.htm.

⁵⁵ Maria Adele Carrai et al., *The Belt and Road Initiative and Global Governance:* By Way of Introduction, in The Belt and Road Initiative and Global Governance 1, 2 (Maria Adele Carrai et al. eds., 2020).

^{56 &}quot;Yidai yilu" xingdong jihua ("一帶一路"行動計劃) [Action Plan on the Belt and Road Initiative], Zhengfu Wangluo (政府网) [GOV.CN] (Mar. 30, 2015, 7:31 PM), http://english.gov.cn/archive/publications/2015/03/30/content_281475080249035.ht m

⁵⁷ Jyh-An Lee, *The New Silk Road to Global IP Landscape*, CHINESE U. H.K. FAC. L. RSCH. PAPER NO. 2016-30, 417, 417 (2016).

instance, Xinhua News Agency and China International Intellectual Corporation established "a database that documents seven indices of IP risks" in BRI jurisdictions.⁵⁸ The database serves to alert Chinese enterprises of IP risks when they consider investing in BRI projects.⁵⁹

Furthermore, at the 19th National Congress in October 2017, President Xi doubled-down on the BRI by including it in the Communist Party's Constitution. ⁶⁰ The BRI project reflects the Chinese President's plan to secure his legacy in leading China to a global leadership role. ⁶¹ With 138 countries across Asia, Africa, and Europe having joined the BRI, the initiative has driven trade and capital flows between the East and the West by improving ancient infrastructure and maritime routes. ⁶² These routes will make high-growth developing countries more accessible over the next few decades, and the routes will include access to two-thirds of the world's population. ⁶³

The BRI is designed to increase international production capacity, cooperation, and infrastructure connectivity.⁶⁴ From 2013 to 2018, direct investment by Chinese companies in countries along the route exceeded US \$90 billion, averaging an annual growth rate of 5.2%.⁶⁵ The value of newly-signed contracts in countries along the route exceeded US \$600 billion, providing an average annual growth rate of 11.9%.⁶⁶ By the end of April 2019, many Chinese companies and foreign countries jointly established several trade cooperation zones, with a cumulative investment of nearly US \$40 billion.⁶⁷

It is anticipated the BRI will consume most of China's outbound investment in the decades to come and cost over \$1.7 trillion per year through 2030.⁶⁸ Based on this infrastructure investment, the annual trade volume between China and countries along the BRI routes is

⁵⁹ *Id.* at 420–21.

⁵⁸ *Id.* at 420.

⁶⁰ Brenda Goh & John Ruwitch, *supra* note 52.

⁶¹ *Id*

⁶² Belt and Road Initiative, Eur. BANK FOR RECONSTRUCTION & DEV., https://www.ebrd.com/what-we-do/belt-and-road/overview.html (last visited Oct. 27, 2021).

⁶³ Chatzky & McBride, *supra* note 49.

⁶⁴ MINISTRY OF FOREIGN AFFS. OF CHINA, CHINA'S PROGRESS REPORT ON IMPLEMENTATION OF THE 2030 AGENDA FOR SUSTAINABLE DEVELOPMENT 44 (2019), https://www.fmprc.gov.cn/mfa_eng/topics_665678/2030kcxfzyc/P02019092478082 3323749.pdf.

⁶⁵ *Id*.

⁶⁶ *Id*.

⁶⁷ *Id.* at 44–45

⁶⁸ Peter J. Rimmer, *China's Belt and Road Initiative: Underlying Economic and International Relations Dimensions*, 32 ASIAN-PAC. ECON. LITERATURE 3, 20 (2018).

expected to exceed US \$2.5 trillion in the next ten years.⁶⁹ The BRI is

estimated to increase global income by 0.7% by 2030.70

Investment in infrastructure is paramount indeed. Innovation, too, is critical to future growth for China and its companies. ⁷¹ Consequentially, the securitzation of IP rights will be of utmost importance as these massive investments are rolled out. ⁷² The BRI,

⁶⁹ Editorial Board, 'One Belt, One Road' Initiative Will Define China's Role as a World Leader, S. CHINA MORNING POST (Apr. 2, 2015, 12:45 AM), https://www.scmp.com/comment/insight-opinion/article/1753773/one-belt-one-road-initiative-will-define-chinas-role-world. A wary U.S. Secretary of Defense James N. Mattis was critical of the One Belt One Road initiative, reminding us that China has a historical antecedent to follow:

[T]he Ming Dynasty appears to be their model, albeit in a more muscular manner, demanding other nations become tribute states, kowtowing to Beijing; espousing One Belt, One Road, when this diverse world has many belts and many roads; and attempting to replicate on the international stage their authoritarian domestic model, militarizing South China Sea features while using predatory economics of piling massive debt on others.

James N. Mattis, Sec'y of Def., Remarks at the U.S. Naval War College Commencement, Newport, Rhode Island (June 15, 2018), https://www.defense.gov/Newsroom/Transcripts/Transcript/Article/1551954/remark s-by-secretary-mattis-at-the-us-naval-war-college-commencement-newport-rh/.

⁷⁰ Maryla Maliszewska & Dominique van der Mensbrugghe, *The Belt and Road Initiative: Economic, Poverty and Environmental Impacts* 7 (World Bank Grp., Working Paper No. 8814, 2019).

⁷¹ China's investment in infrastructure will remain key in its growth and competitiveness with the U.S.:

[C]hina will remain the top threat to US technological competitiveness as the CCP targets key technology sectors and proprietary commercial and military technology from US and allied companies and research institutions associated with defense, energy, finance, and other sectors. Beijing uses a variety of tools, from public investment to espionage and theft, to advance its technological capabilities.

DIR. OF NAT'L INTEL., ANNUAL THREAT ASSESSMENT OF THE U.S. INTELLIGENCE COMMUNITY 7 (2021).

[I]n the past two years, governments around China have promoted intellectual property securitization projects and issued supporting documents to provide policy support. . . . Since 2018, China has approved and issued more than 20 intellectual property securitization products, achieving financing of more than 200 billion yuan. . . . At this stage, all localities are actively exploring a more market-oriented, standardized, replicable and efficient

⁷² China is aware that securitization of IP rights is important:

through a myriad of bilateral and regional trade and investment agreements, should fortify IP rights to protect Chinese innovations. For Peter K. Yu, however, "it remains unclear how the initiative will affect the country and the world at large in the intellectual property area. To be sure, there has not been much discussion in academic or governmental spheres of the BRI in this area." ⁷³ Certainly, consideration of IP issues via the BRI has fallen on the backburner as the main focus of this Chinese-led project has been on the development of infrastructure.

This is no surprise. China gained entry to the World Trade Organization ("WTO") as a Member in late 2001.⁷⁴ It was only in 2007 that the PRC joined the amended Agreement on Trade-Related Aspects of Intellectual Property Rights ("TRIPs"), which is part of the WTO plurilateral agreements.⁷⁵ When working to update and harmonize its IP laws, China had a relatively short period of time to achieve compliance with WTO standards.⁷⁶ Indeed, the first patent laws in the

business model of intellectual property securitization. Beijing, Shanghai, Guangzhou, Shenzhen, Suzhou, Foshan, Yantai and other cities have officially issued intellectual property securitization projects[.]

Zhao Zhuqin (趙竹勤) & Lv Qian (呂謙), Zhishi Chanquan Zhengquan Hua: Zhuanli "Bianxian" Pao Chu Jiasu (知識產權證券化:專利"變現"跑出加速) [Intellectual Property Securitization: Patent "Realization" Ran Out of Acceleration], Renmai Wangluo (人民网) [PEOPLE.CN] (June 18, 2021, 2:31 PM), http://ip.people.com.cn/n1/2021/0618/c136655-32134246.html.

[I]n 2000 and 2008, China amended its patent law twice, of which nearly one-third of the content was related to the WTO Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPs Agreement); in 2001 and 2013, China amended its trademark law twice, adding more than 20 articles in response to the TRIPs agreement; in 2001 and 2010, China amended the copyright law twice, refining the specific content of copyright, and made relevant regulations compatible with WTO regulations.

Sun Di (孫迪), Zhongguo Rushi 15 Nian: Zhishi Chanquan Zhangxian "Zhongguo Liliang" (中國入世15年: 知識 產 權彰顯"中國力量") [15 Years After China's Accession to the WTO: Intellectual Property Highlights "Chinese Power"], Zhongguo

⁷³ Peter K. Yu, *Building Intellectual Property Infrastructure Along China's Belt and Road*, 14 U. PA. ASIAN L. REV. 275, 286 (2019).

⁷⁴ WTO Ministerial Conference Approves China's Accession, WORLD TRADE ORG. (Nov. 10, 2001), https://www.wto.org/english/news_e/pres01_e/pr252_e.htm.

⁷⁵ Amendment of the TRIPS Agreement, WORLD TRADE ORG., https://www.wto.org/english/tratop_e/trips_e/amendment_e.htm (last visited Oct. 27, 2021).

⁷⁶ A brief timeline of Chinese revisions:

country only came into force in 1985.⁷⁷ Even with these recent origins of Chinese trademark law, China has taken historic steps towards the protection of trademark rights: China entered into the Madrid Agreement in 1989, and the Madrid Protocol in 1995.⁷⁸ China has utilized the TRIPs just in time to secure the IP rights that are the backbone of the innovations in which it is investing. In 2017,

[C]hina remained the main driver of global growth in IP filings. From already high levels, patent filings in China grew by 14.2% and trademark filing activity in China by 55.2%. These high growth rates propelled China's shares of global patent filings and trademarks filing activity to reach 43.6% and 46.3%, respectively.⁷⁹

The Trademark Law Implementing Regulations and the Supreme People's Court Interpretation of Trademark Disputes, in 2014 and 2016 respectiely, provided guidance to trademark practice in China.⁸⁰ An

Zhishi Chanquan Bao (中國知識產權報) [CHINA INTELL. PROP. NEWS] (Dec. 16, 2016, 12:30 PM), http://chinawto.mofcom.gov.cn/article/ap/o/201706/20170602590144.shtml.

⁷⁷ Zhonghua Renmin Gongheguo Zhuanli Fa (中華人民共和國專利法) [Patent Law of the People's Republic of China] (promulgated by the Standing Comm. Nat'l People's Cong., Mar. 12, 1984, effective Apr. 1, 1985), amended by 2008 STANDING COMM. NAT'L PEOPLE'S CONG. GAZ.

⁷⁸ Notification No. 41, Madrid Agreement Concerning the International Registration of Marks, Accession by the People's Republic of China (Jul. 4, 1989), https://www.wipo.int/treaties/en/notifications/madrid-gp/treaty_madrid_gp_41.html; Notification No. 70, Protocol Relating to the Madrid Agreement Concerning the International Registration of Marks, Entry into Force (Sept. 11, 1995), https://www.wipo.int/treaties/en/notifications/madridp-gp/treaty_madridp_gp_70.html. The Madrid Agreement and the Madrid Protocol make up the Madrid System for the International Registration of Marks. This system "makes it possible to protect a mark in a large number of countries by obtaining an international registration that has effect in each of the designated Contracting Parties." *Protocol Relating to the Madrid Agreement Concerning the International Registration of Marks*, WIPO, https://www.wipo.int/treaties/en/registration/madrid_protocol/ (last visited Nov. 14, 2021).

⁷⁹ WIPO, WORLD INTELLECTUAL PROPERTY INDICATORS 5 (2018), https://www.wipo.int/edocs/pubdocs/en/wipo_pub_941_2018.pdf.

^{**}See generally** Zhonghua Renmin Gongheguo Shangbiao Fa Shishi Tiaoli (中華人民共和國商標法實施條例) [Regulations for the Implementation of the Trademark Law of the People's Republic of China] (promulgated by the State Council of China, Aug. 3, 2002, revised and promulgated by the State Council of China, Apr. 29, 2014, effective May 1, 2014) lawinfochina.com, Apr. 29, 2014, https://www.lawinfochina.com/display.aspx?id=17968&lib=law; Zuigao Renmin Fayuan Guanyu Shenli Zhuanli Qinquan Anjian Shiyong Falu Ruogan Wenti De Jieshi (Er) (最高人民法院關於審理專利侵權案件適用法律若干問題的解釋(二))[Interpretation of the Supreme People's Court on Several Issues Concerning the

article that reported on an interview with Gu Qingyang, Associate Professor of the Lee Kuan Yew School of Public Policy at the National University of Singapore, stated:

[G]u Qingyang said that strengthening intellectual property cooperation with partners along the "Belt and Road" will help improve the international intellectual property governance system and comprehensively improve the overall protection level of intellectual property in relevant countries. [Gu Qingyang explained] "[t]his is useful for promoting technology and knowledge sharing between partners. It is of great significance to promote the construction of a community with a shared future for mankind."81

Currently, more than forty countries along the Belt and Road and SIPO have established formal relations, which has involved "in-depth cooperation with regional organizations such as the Patent Office of the Gulf Cooperation Council, [the Association of Southeast Asian Nations], and the Eurasian Patent Office." Chinese patents have been upheld in more countries because "WIPO signed an intergovernmental agreement to strengthen the 'Belt and Road' [IP] cooperation[.]" In 2020, the Regional Comprehensive Economic Partnership Agreement was formed to encourage "cooperation between China and countries and regions along the 'Belt and Road' in [IP] rights." Gu Qingyang further explained:

[C]hina's international trade cooperation with countries and regions along the [BRI] is becoming closer and closer. The service industry is an important field for the joint construction of the [BRI]. The [data referenced in the article] partly reflects that China promotes the deep integration of advanced manufacturing and modern

Application of Law in the Trial of Patent Infringement Cases (II)] (promulgated by the Sup. People's Ct., Jan. 25, 2016, effective Apr. 1, 2016) CCPIT Pat. and Trademark L. Off., https://www.ccpit-patent.com.cn/node/3219/3218.

^{**}I Liu Hui (劉輝), "Zhongguo zhishi chanquan baohu fangmian qude zhongda jinzhan" ("中國知識 產 權保護取得重大進展") ["China has made Significant Progress in Intellectual Property Protection"], Renmai Wangluo (人民网) [PEOPLE.CN] (May 6, 2021, 11:09 AM), http://world.people.com.cn/n1/2021/0506/c1002-32095589.html.

⁸² *Id*.

⁸³ *Id*.

⁸⁴ *Id*.

service industries, accelerates the development of productive services, and promotes the adjustment and upgrading of industrial structure.⁸⁵

But the details of the deals that comprise the BRI are still elusive: "[A] vast literature produced by official media, academics and think tanks in China provides explanations of the BRI. This domestic literature of explanation and interpretation has addressed multiple aspects of the BRI, yet does not necessarily increase clarity concerning its nature."86

PRC President Xi Jingping, also the General Secretary of the Communist Party of China Central Committee, has been a zealous advocate of IP rights to be registered.⁸⁷ President Xi has stressed the importance of strengthening IP protection to stimulate "the vitality of innovation and foster a new development paradigm." During a discussion of IP protection in 2020, President Xi stated:

[I]t is necessary to deepen cooperation with countries and regions along the "Belt and Road" in the joint construction of intellectual property rights, and promote knowledge sharing. . . . As I said, external transfer of intellectual property rights must adhere to the overall national security concept. It is necessary to strengthen independent research and development and protection of key core technologies related to national security, and to manage the transfer of intellectual property rights related to national security in accordance with the law. It is necessary to improve laws, regulations, and policy

⁸⁵ *Id*.

⁸⁶ Freeman, *supra* note 53, at 121.

⁸⁷ See Matt Ho, Chinese President Xi Jinping Says Intellectual Property Protection Is Key Part of Country's Develoment Plans, S. CHINA MORNING POST (Feb. 2, 2021, 6:00 AM), https://www.scmp.com/news/china/politics/article/3120118/chinese-president-xi-jinping-says-intellectual-property; see also Xi Jingping Calls for Intellectual Property Protection to Stimulate Innovation, CGTN html (Jan. 31, 2021, 8:50 PM), https://news.cgtn.com/news/2021-01-31/Xi-s-article-on-intellectual-property-protection-to-be-published-XuZZHgXh60/index.html.

⁸⁸ Xi Jujiao: Xi Fabiao Zhishi Chanquan Baohu Wenzhang (習聚焦: 習發表知識 產 權保護文章) [Xi Focus: Xi's Article on Intellectual Property Rights Protection to be Published], Xinhua Wang (新華網) [XINHUANET] (Jan. 31, 2021, 7:26 PM), http://www.xinhuanet.com/english/2021-01/31/c_139711081.htm. But cf. Aaron Wininger, China's President Xi Jinping Throws His Support Behind an Intellectual Property Rights Waiver for COVID Vaccines, NAT'L L. REV. (May 26, 2021), https://www.natlawreview.com/article/china-s-president-xi-jinping-throws-his-support-behind-intellectual-property-rights (stating that President Xi supports the initiative to waive IP rights of COVID-19 vaccines).

measures related to intellectual property anti-monopoly and fair competition, and form legitimate and powerful restraints. It is necessary to promote the extraterritorial application of China's intellectual property laws and regulations, and improve cross-border judicial coordination arrangements. It is necessary to form an efficient early warning and emergency response mechanism for international intellectual property risks, build a system for preventing and controlling intellectual property foreign-related risks, and increase assistance for overseas intellectual property rights protection of Chinese enterprises.⁸⁹

III. MOVING FROM A PRODUCER SOCIETY TOWARD A CONSUMER SOCIETY: THE CHANGING DEMANDS OF THE CHINESE DOMESTIC MARKET

If China is to reap the benefits from its burgeoning global trade network, the country must continue to grow as an innovation exporter. However, the Chinese will also have to be consumers of these innovations. In an effort to boost domestic consumption, the State Council approved a new guideline on improving consumer goods standards and quality on August 24, 2016, which was initiated by the General Administration of Quality Supervision, Inspection and Quarantine. Premier Li Keqiang said, "[g]overnment departments should enhance coordination, while enterprises need to have stronger emphasis on quality, branding, R&D and marketing. They also need to create mass awareness on branding."

While realizing the weakness of domestic production, Premier Li also stressed that "[i]t is important that the quality of consumer goods made in China can withstand the test of the market." There is risk of the "boomerang effect" in China, like in India, wherein "[t]he impact of more than two billion consumers wanting more—more foodstuffs, water, housing, transport, luxury goods, education, and healthcare—

⁸⁹ Xi Jinping, President of the People's Republic of China, Strengthen Intellectual Property Protection Comprehensively, Stimulate Innovation Vitality and Promote the Construction of a New Development Pattern, CHINA INTELL. PROP. JUD. PROT. NETWORK (Nov. 30, 2020), https://www.chinaiprlaw.cn/index.php?id=5664.

⁹⁰ Zhang Yue (張越), Zhongguo Fabu Xin Guize Yi Tigao Xiaofeipin Zhi Liang (中國發布新規則以提高消費品質量) [China Issues New Rules to Improve Quality of Consumer Goods], Zhengfu Wangluo (政府网) [GOV.CN] (Aug. 25, 2016, 10:11 PM), http://english.gov.cn/premier/news/2016/08/25/content281475425704697.htm.

⁹¹ *Id*.

⁹² *Id*.

will be inflation in supply-constrained commodities, price volatility, scarcity of some resources, and hypercompetition to meet consumers' needs."93

Increasingly, the Chinese want the real thing, not knock offs, counterfeits, or fake products. "China's share of the global luxury goods market was about 32 percent in 2020." An estimated one-third of global spending on high-end goods will occur in China. Moving forward, IP rights will surely grow in importance, and not just for the consumption of luxury brands. The ascending middle class also requires products that deliver technical, functional, and emotional benefits, along with aspirational products that seemed—just a few years ago—out of reach. In addition,

[T]hree great forces are ushering in this transformation [of the Chinese consumer market]: the rise of the uppermiddle-class and affluent households as the drivers of consumption growth; a new generation of freerspending, sophisticated consumers; and the increasingly powerful role of e-commerce. Research by The Boston Consulting Group and AliResearch, the research arm of Alibaba, China's largest e-commerce company, found that these three forces of change will profoundly reshape China's economy and consumer market over the next five years. Through 2020, 81% of consumption growth will come from households whose annual income is more than \$24,000. Furthermore, consumers 35 or younger will account for 65% of growth. E-commerce will become a far more important retail channel, driving 42% of total consumption growth, 90% of that growth coming from mobile e-commerce.⁹⁶

 $^{^{93}}$ Michael J. Silverstein et al., The \$10 Trillion Prize: Captivating the Newly Affluent in China and India at xv (2012).

⁹⁴ Cyril Ip, *China's Luxury Goods Market: How Big is it, and What Impact has the Coronavirus Pandemic Had?*, S. CHINA MORNING POST (Nov. 6, 2021, 2:30 PM), https://www.scmp.com/economy/china-economy/article/3154985/chinas-luxury-goods-market-how-big-it-and-what-impact-has.

⁹⁵ Bruce Einhorn et al., *Online Shopping in China Goes Luxury, With Men in Black Delivering Hermes*, BLOOMBERG (May 20, 2019, 11:12 AM), https://www.bloomberg.com/news/articles/2019-05-16/china-s-112-billion-luxury-goods-market-is-shifting-online.

⁹⁶ Jeff Walters et al., *The New China Playbook: Young, Affluent, E-Savvy Consumers Will Fuel Growth*, Bos. Consulting Grp. (Dec. 21, 2015), https://www.bcg.com/publications/2015/globalization-growth-new-china-playbook-young-affluent-e-savvy-consumers.aspx.

As China moves from producer to consumer in its economic growth, brand awareness and brand protection will take on even greater importance. 97 When products have a patent or trademark or an indication of a patent pending, they are likely of higher quality. 98 This is a signal of an emerging consumer society. 99 According to McKinsey & Company, Chinese consumers "continue to increase their spending by a considerable margin and are eager to pay for items with a strong value proposition." 100

China's strengthening consumer marketplace was facilitated by a proliferating online economy. ¹⁰¹ In 2018, it was estimated that over 800 million people in the country took part in electronic commerce. ¹⁰² As

[C]hina's total digital economy ranks second in the world and has become an important source of leading global digital economy innovation. In 2020, the added value of China's digital economy core industries accounted for 7.8% of GDP. The scale of digital industrialization continues to grow. Software business revenue has increased from 4.9 trillion yuan in 2016 to 8.16 trillion yuan in 2020. . . . China's e-commerce transaction volume has increased from 21.8 trillion yuan in 2015 to 37.2 trillion yuan in 2020. Information consumption is booming. From 2015 to 2020, the scale of China's information consumption increased from 3.4 trillion yuan to 5.8 trillion yuan. . . . In 2020, China's national online retail sales reached 11.76 trillion yuan, ranking first in the world for eight consecutive years. Among them, the online retail sales of physical goods was 9.76 trillion yuan, accounting for nearly a quarter of the total retail sales of consumer goods.

Guojia Hulianwang Xinxi Bangongshi Fabu "Shuzi Zhongguo Fazhan Baogao 2020" (國家互聯網信息辦公室發布《數字中國發展報告2020》) [National Internet Information Office Released the Digital China Development Report 2020], Zhongguo Wangluo Kongjian Guanli Ju (中國網絡空間管理局) [CYBERSPACE ADMIN. OF CHINA] (July 2, 2021, 6:55 PM), http://www.cac.gov.cn/2021-06/28/c 1626464503226700.htm.

 $^{^{97}}$ Stephen Roach, Unbalanced: The Codependency of America and China 156 (2014).

⁹⁸ See generally Hefa Song & Zhenxing Li, Patent Quality and the Measuring Indicator System: Comparison Among China's Provinces and Key Countries (2014), https://www.law.berkeley.edu/files/Song_Hefa_IPSC_paper 2014.pdf.

⁹⁹ See Andrew Sheng (安德魯·盛) & Xiao Geng (小庚), Zhongguo Xiaofei Zhe Shehui De Xingcheng (中國消費者社會的形成) [The Making of China's Consumer Society], Zhongguo Ribao (中國日報) [CHINA DAILY] (Sept. 5, 2016, 7:27 AM), http://www.chinadaily.com.cn/opinion/2016-09/05/content 26697254.htm.

¹⁰⁰ Johnny Ho et al., McKinsey & Co., China Consumer Report 2020: The Many Faces of the Chinese Consumer 3 (2019).

¹⁰¹ Regarding China's online economy:

¹⁰² Niall McCarthy, China Now Boasts More than 800 Million Internet Users and 98% of Them Are Mobile [Infographic], FORBES (Aug. 23, 2018, 7:30 AM),

an example of the oversized role that online commerce plays in China, consider the effects of its annual Singles' Day, an event like Black Friday in the U.S., during which online retailers slash prices. This online extravaganza turns China's bachelor crisis into an economic windfall. In 2021, consumers set a new record of US \$139.1 billion. To demonstrate how impressive these Chinese results were, note that in the U.S., sales on Black Friday in 2021 totaled \$8.9 billion. Cyber Monday in the U.S. on November 29, 2021, saw online transactions reach \$10.7 billion.

https://www.forbes.com/sites/niallmccarthy/2018/08/23/china-now-boasts-more-than-800-million-internet-users-and-98-of-them-are-mobile-infographic/#59305f647092. In early 2021, China released a report with metrics on China's internet development status:

[S]ince 2013, China has become the world's largest online retail market for eight consecutive years. In 2020, China's online retail sales reached 11.76 trillion yuan, an increase of 10.9% over 2019. Among them, the online retail sales of physical goods was 9.76 trillion yuan, accounting for 24.9% of the total retail sales of consumer goods. As of December 2020, the number of online shopping users in China has reached 782 million, an increase of 72.15 million from March 2020, accounting for 79.1% of the total Internet users. . . . As of December 2020, the number of online payment users in China has reached 854 million, an increase of 86.36 million from March 2020, accounting for 86.4% of the total Internet users.

Zhongguo Hulianwang Luo Xinxi Zhongxin Fabu Di 47 Ci Zhongguo Hulianwang Luo Fazhan Zhuangkuang Tongji Baogao (中國互聯網絡信息中心發布第47次中國互聯網絡發展狀況統計報告) [CNNIC Releases the 47th Statistical Report on China's Internet Development Status], Zhongguo Wangluo Kongjian Guanli Ju (中國網絡空間管理局) [CYBERSPACE ADMIN. OF CHINA] (Feb. 3, 2021, 9:00 AM), http://www.cac.gov.cn/2021-02/03/c_1613923422728645.htm.

¹⁰³ Xin En Lee, *The World's Biggest Shopping Holiday Is in China—Not the US. Here's How Singles Day Became No. 1*, CNBC (Dec. 4, 2018, 3:05 AM), https://www.cnbc.com/2018/12/04/how-chinas-singles-day-became-the-worlds-biggest-shopping-holiday.html.

¹⁰⁵ Zen Soo, *Chinese Shoppers Spend \$139 Billion During Singles' Day Fest*, U.S. NEWS (Nov. 12, 2021, 5:40 AM), https://www.usnews.com/news/business/articles/2021-11-11/chinas-singles-day-shopping-extravaganza-loses-luster.

106 Emma Roth, Online Spending on Black Friday Decreased for the Very First Time, VERGE (Nov. 28, 2021, 12:39 PM), https://www.theverge.com/2021/11/28/22806233/black-friday-online-spending-decreased-first-time?mc_cid=ba8774d208&mc_eid=f885456765.

107 Lauren Thomas, Cyber Monday Sales Drop 1.4% From Last Year to \$10.7 Billion, Falling for the First Time Ever, CNBC, https://www.cnbc.com/2021/11/30/cyber-monday-online-sales-drop-1point4percent-

¹⁰⁴ *Id*.

Business consultants have predicted that "Chinese children born today will consume nearly thirty-eight times as much as their grandparents did[.]" Yet, in the 1970s and 1980s, the Chinese had to use ration tickets to buy almost all daily necessities from state-run stores. This was only a few decades after mass starvation gripped the country during its forced agicultural collectivation polices. Ho Chinese are a far cry away from that now as shopping has become a form of entertainment. A joint report from the World Economic Forum and Bain & Company estimated that \$8.2 trillion of consumption will occur in China by 2027.

[T]he overall pace at which Chinese consumption has grown is almost hard to imagine: Just a decade ago, most urban Chinese had enough money to cover basic needs like food, clothes, and housing (92 percent had annual household disposable incomes of 140,000 renminbi or less). Today, half are living in relatively well-to-do households (annual disposable incomes of 140,000–300,000 renminbi) where they have ample funds for perks like regular meals out, beauty products, flat screen TVs, and holiday travel. 114

A Chinese consumer society should indeed improve the lives of hundreds of millions of people, and spread benefits of the industrial boom that began in the 1980s beyond the country's eastern coast.¹¹⁵

from-last-year-to-10point7-billion-falling-for-the-first-time-ever.html (Nov. 30, 2021, 8:29 PM).

¹⁰⁸ SILVERSTEIN ET AL., *supra* note 93, at xiii.

¹⁰⁹ Cindy Sui, What the World's Largest Shopping Day Says About China, BBC (Nov. 11, 2017), http://www.bbc.com/news/world-asia-china-41954591.

¹¹⁰ Brian Palmer, *Why Does China Not Have Famines Anymore?*, SLATE (Apr. 2, 2014, 8:31 AM), https://slate.com/technology/2014/04/why-does-china-not-have-famines-anymore-capitalist-and-socialist-reforms.html.

¹¹¹ See Sui, supra note 109.

¹¹² See id.

 $^{^{113}}$ Future of Consumption in Fast-Growth Consumer Markets: China, Bain & Co. (Jan. 26, 2018), https://www.bain.com/insights/future-of-consumption-in-fast-growth-consumer-markets-wef/.

¹¹⁴ Ho, *supra* note 100, at 4.

¹¹⁵ Andrew Sheng (安德魯·盛) & Xiao Geng (小庚), Zhongguo Xiaofei Zhe Shehui De Xingcheng (中國消費者社會的形成) [The Making of China's Consumer Society], Zhongguo Ribao (中國日報) [CHINA DAILY] (Sept. 5, 2016, 7:27 AM), http://www.chinadaily.com.cn/opinion/2016-09/05/content_26697254.htm; Tomas Hirst, A Brief History of China's Economic Growth, WORLD ECON. F. (July 30, 2015), https://www.weforum.org/agenda/2015/07/brief-history-of-china-economic-growth/.

This expansion underscores why many countries in the G-20 have for years encouraged the Chinese to consume more. 116 And with more focus on consumers and less on export-led growth, the service sector will naturally grow as well. 117 Factories that offer employment but spew pollution are to be balanced by services like education, financial services, insurance, entertainment, and health and beauty, among others.118 Many of these industries require innovation and, thus, the development and protection of IP rights will be of utmost importance. When looking to the U.S. economy's shift from manufacturing-based to services-based posture for guidance, the importance of IP rights becomes clear. In 1975, 80% of the market value of the S&P 500 was comprised of physical assets (plant, property, and equipment). 119 However, today "the majority of market value is made up of intangible (networks, platforms, intellectual property, relationships, big data) more than physical assets. In fact, it's not even close: intangible assets make up over 80% of the S&P 500's market value—a complete reversal from 1975."¹²⁰

This exponential market value increase occurred as the technology industry grew. ¹²¹ It was likely garnered by licensing, royalties, and other rents that were drawn by corporations from their trading partners. According to the International Chamber of Commerce: "In many companies even now, 80% or more of their market value is attributable to intangibles, including IP. In some small companies, the only value

The see Maria Elena Spagnolo (), Caifang: Zhongguo Zai G20 Fenghui Shang De Zuoyong Dui Quanqiu Zengzhang Zhi Guan Zhongyao: Yidali Zhuanjia (採訪:中國在 G20 峰會上的作用對全球增長至關重要:意大利專家) [Interview: China's Role in G20 Summit Vital to Global Growth: Italian Expert], Xinhua Wang (新華網) [XINHUANET] (Aug. 9, 2016, 7:28 AM), http://english.cctv.com/2016/08/09/ARTIak2ZKVhi7cDxcoBUkxVq160809.shtml ("China's growth helps other countries' growth.").

¹¹⁷ See BAIN & COMPANY, supra note 113 (stating that one of the four major drivers shaping consumption in China over the next decade includes China's economy migrating from an investment-driven model to a consumption- and services-driven model).

¹¹⁸ See Sheng, supra note 115 (noting that China's transformation away from a manufacturing-driven and export-led economy to instead one that is underpinned by services and domestic consumption is already firmly underway).

¹¹⁹ Barry Libert et al., *Why Leaders Are Still so Hesitant to Invest in New Business Models*, HARV. Bus. Rev. (Dec. 21, 2016), https://hbr.org/2016/12/why-leaders-are-still-so-hesitant-to-invest-in-new-business-models.

 $^{^{120}}$ Id.

¹²¹ See generally Jenna Ross, Intangible Assets: A Hidden but Crucial Driver of Company Value, VISUAL CAPITALIST (Feb. 11, 2020), https://www.visualcapitalist.com/intangible-assets-driver-company-value/ (showing the dramatic changes over many decades of intangible assets, their growth, and what that can be attributed to).

is the intellectual property they own in an exciting new innovation that they have developed."¹²²

IP rights—as intangible assets—are becoming increasingly tradable, and are used to secure capital and encourage investment in research and development.¹²³ For instance, a small start-up may use its properly-secured IP rights to prevent competition and may also use its IP rights defensively when accused of IP infringement. 124 In the U.S., Article 9 of the Uniform Commercial Code provides that a company may put up its IP rights as collateral to secure financing, which can then be sold upon default to cover the creditor's losses. 125 Nevertheless, IP rights do not always benefit a society still growing its businesses. Small businesses may be adversely impacted by international IP laws and agreements. 126 To illustrate, the research and design costs associated with ensuring non-infringing use in business branding and product development, and the potential necessity of license fee payments to an IP owner, may create an insurmountable financial hurdle to the small business. 127 This, in turn, may thwart some entrepreneurs from starting their business, "which [then] lowers the potential for job creation by small businesses."128 As a former President of the U.S. Chamber of Commerce aptly remarked: "IP is critical to public safety and consumer confidence. In other words, strong IP protections and enforcement are important to preventing dangerous products—such as counterfeit pharmaceuticals or toys—from getting into consumers' hands. Trademarks give customers confidence that they are buying genuine, high-quality products from brands they trust."129

Take medicine for example: "Across the globe, counterfeit medicines are a major threat to public health and safety." Every region of the world is affected by counterfeit medical products, which

¹²² Allen N. Dixon, Int'l Chamber of Com., Intellectual Property: Powerhouse for Innovation and Economic Growth 2 (2011).

¹²³ Org. for Econ. Coop. & Dev., Eur. Union Intell. Prop. Off., Trade in Counterfeit and Pirated Goods: Mapping the Economic Impact 25–27 (2016).

¹²⁴ Bryant Lee et al., *IP strategy: How Should Startups Decide Whether to File Patents*, TECHCRUNCH+ (July 3, 2019, 10:03 AM), https://techcrunch.com/2019/07/03/ip-strategy-how-should-startups-decide-whether-to-file-patents/.

¹²⁵ Kyle Tondo-Kramer, Comment, *Increasing Access to Startup Financing Through Intellectual Property Securitization*, 27 J. MARSHALL J. COMPUT. & INFO. L. 613, 615 (2010).

¹²⁶ See generally Leah Chan Grinvald, Resolving the IP Disconnect for Small Businesses, 95 MARQ. L. REV. 1491 (2012).

¹²⁷ *Id.* at 1500–01.

¹²⁸ *Id.* at 1501.

¹²⁹ Thomas J. Donohue, *Intellectual Property Has Huge Impact on Society*, U.S. CHAMBER OF COM. (Nov. 17, 2014, 9:00 AM), https://www.uschamber.com/above-the-fold/intellectual-property-has-huge-impact-society.

¹³⁰ James M. Cooper, *Piracy 101*, 36 CAL. W. INT'L L. J. 89, 90 (2005).

are available in illegal street markets, on unregulated websites, and in pharmacies and medical facilities.¹³¹ Some "counterfeit medicines can, in theory, be of high-quality, perfectly safe, and efficacious." ¹³² However, generally, counterfeit medical products are especially dangerous to public health because they are ineffective to cure or combat the medical ailment for which the medicine is used, or worse, further harm the patient where the product contains contaminants or toxic components. ¹³³ Continued and widespread availability of counterfeit medical products leads to distrust in healthcare, including in medicines and medical providers. ¹³⁴

Securitization of IP rights promotes product safety and public security. Counterfeit foods and other consumables cause a host of problems, including customer confusion as to the true good offered by the mark holder, damage to the mark holder's reputation, physical harm to the consumer because of harmful agents or unregulated production, and lost profits from sales diversion.¹³⁵

IP is also an incentive for innovations that enhance and improve lives. When artists, inventors, or scientists have assurances that their works are protected and rewarded by IP rights, they are more inclined or able to produce. With strong copyright laws, musicians are more likely to record new albums. Likewise, "[p]atent protections enable pharmaceutical companies to take on the costs and challenges of putting lifesaving new drugs on the market. Without opportunities for ownership or profit, the incentive to innovate falls." ¹³⁶ In short, IP "[I]nadequate IPR protection and rights protect innovation too. enforcement in foreign markets discourages entry into technology transfer arrangements and broader investment in those markets." ¹³⁷ China has realized the importance of innovation and IP rights. Indeed, "intellectual property protection is a significant determinant of economic growth."138

¹³¹ Substandard and Falsified Medical Products, WORLD HEALTH ORG. [WHO] (Jan. 31, 2018), http://www.who.int/entity/mediacentre/factsheets/fs275/en/.

¹³² Jonathan Liberman, Combating Counterfeit Medicines and Illicit Trade in Tobacco Products: Minefields in Global Health Governance, 40 J.L. MED. & ETHICS 326, 329 (2012).

¹³³ *Id*.

¹³⁴ *Id*.

See Laura Zanzig, The Perfect Pairing: Protecting U.S. Geographical Indications with a Sino-American Wine Registry, 88 WASH. L. REV. 723, 724 (2013).
 DONOHUE, supra note 129.

¹³⁷ U.S. TRADE REPRESENTATIVE, 2016 SPECIAL 301 REPORT 25 (2016), https://ustr.gov/sites/default/files/USTR-2016-Special-301-Report.pdf.

¹³⁸ David M. Gould & William C. Gruben, *The Role of Intellectual Property Rights in Economic Growth*, 48 J. DEV. ECON. 323, 323 (1996); *cf.* E. Richard Gold et al., *Does Intellectual Property Lead to Economic Growth? Insights from an Improved IP Data Set*, REGUL. & GOVERNANCE (May 31, 2017),

IV. MOVING FROM THE SMOKESTACK ECONOMY TOWARD THE KNOWLEDGE-BASED ECONOMY: THE VALUE OF INTELLECTUAL PROPERTY AND CHINA'S RECORD

IP rights are based on knowledge.¹³⁹ Inexpensive manual labor has fueled much of China's growth over the last three decades.¹⁴⁰ IP also derives from innovation, ¹⁴¹ which in turn results from good educational systems and a focus on invention rather than manual labor. ¹⁴² Investments in R&D have become increasingly important as part of the national strategy for economic development. ¹⁴³ As Premier Li Keqiang stressed in his annual speech to the National People's Congress in 2017, "[w]e will accelerate [R&D] on and commercialization of new materials, artificial intelligence, integrated circuits, bio-pharmacy, 5G mobile communications and other technologies, and develop industrial clusters in these fields."¹⁴⁴

IP protection is a fundamental part of economic reform for postindustrial and knowledge-based economies. It ensures a safe supply chain for pharmaceuticals, herbals, medical procedures, fully tested and approved medical devices, and other life-enhancing innovations. It also requires the provision of authentic products for the consumer society, which in turn garners tax dollars to the government's revenue authorities, wages to workers, and profits to the owners of innovations.

https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2978025 ("IP leads to greater levels of technology transfer and increased domestic inventive activity.").

¹³⁹ Cohen, *supra* note 2, at 698.

^{140 &}quot;Li Tie, an expert on China's urbanization development issues, pointed out at the Tianjin Davos Forum that the biggest feature of China's economic growth in the past 30 years is that it has become the world's factory[,]" but since its development, this era of artificially cheap costs has passed. Chen Zhifen (陳志芬), Fagaiwei Zhuanjia: Zhongguo Lianjia Laodongli Shidai Yijing Jieshu (發改委專家:中國廉價勞動力時代已經結束) [National Development and Reform Commission Experts: The Era of Cheap Labor Costs in China is Over], Yīngguó Guǎngbò Gōngsī De Xīnwén (英國廣播公司的新聞) [BBC NEWS] (Sept. 12, 2014), https://www.bbc.com/zhongwen/simp/china/2014/09/140912_china_cheap_labour_g one.

¹⁴¹ See Innovation and Intellectual Property, WIPO, https://www.wipo.int/ipoutreach/en/ipday/2017/innovation_and_intellectual_property.html (last visited Oct. 27, 2021).

¹⁴² See Barbara Biasi et al., Education and Innovation 5–6 (NBER, Working Paper No. w28544, 2021), https://ssrn.com/abstract=3804538.

¹⁴³ Smriti Mallapaty, *China's Five-Year Plan Focuses on Scientific Self-Reliance*, NATURE (Mar. 11, 2021), https://www.nature.com/articles/d41586-021-00638-3.

¹⁴⁴ Keith Bradsher & Paul Mozur, *China's Plan to Build Its Own High-Tech Industries Worries Western Businesses*, N.Y. TIMES (Mar. 7, 2017), https://www.nytimes.com/2017/03/07/business/china-trade-manufacturing-europe.html.

There must be protection of IP rights to provide incentives to create further inventions and other advances that can create revenue streams.

China has a great deal to gain if it continues to increase its protection of IP rights. The revenues to be extracted from the rapid growth of the country's knowledge-based economy is unlimited as it transitions away from an assembly line-based economy. Indeed, IP rights protection will matter more and more to China, given that the leading Chinese corporations are among the world's largest filers of international applications for the protection of IP rights.

The post-industrial, knowledge-based global economy continues to grow in leaps and bounds. According to WIPO's World Intellectual Property Indicators 2020 Report, China filed 1.4 million patents in 2019, which accounted for 43.4% of the world's total patent applications that year. In context, Chinese filings accounted for more than twice the number of filings in the U.S. for the same year. China accounted for an even larger percentage of total filings in utility models (96.9%), trademarks (51.7%), and industrial designs (52.3%) in the world. As of 2019, China surpassed the U.S. as the leading country globally in filing international patent applications under the Patent Cooperation Treaty ("PCT"). 148

In 2020, the number of applications filed by the two major users of the PCT system, China and the U.S., both achieved annual growth. 149

[I]n an interview, Gu Qingyang, Associate Professor of the Lee Kuan Yew School of Public Policy at the National University of Singapore, said that in recent years, China has made significant progress in the protection of intellectual property rights. The intellectual property legal system has been increasingly improving, and the number of patent applications has maintained a leading position. It has gradually become a global intellectual property power.

Liu Hui (劉輝), "Zhongguo Zai Zhishi Chanquan Baohu Fangmian Qude Zhongda Jinzhan" ("中國在知識產權保護方面取得重大進展") ["China has made Significant Progress in the Protection of Intellectual Property Rights"], Renmai Wangluo (人民网) [PEOPLE.CN] (May 6, 2021, 11:09 AM), http://world.people.com.cn/n1/2021/

¹⁴⁵ Alex He, *What Do China's High Patent Numbers Really Mean?*, CTR. FOR INT'L GOVERNANCE INNOVATION (Apr. 20, 2021), https://www.cigionline.org/articles/what-do-chinas-high-patent-numbers-really-mean/.

¹⁴⁶ *Id*.

¹⁴⁷ *Id*.

¹⁴⁸ *Id*.

¹⁴⁹ Press Release, WIPO, Innovation Perseveres: International Patent Filings via WIPO Continued to Grow in 2020 Despite COVID-19 Pandemic, WIPO Press Release 2021/874 (Mar. 2, 2021), https://www.wipo.int/pressroom/en/articles/2021/article 0002.html. Regarding China's growth in patent filings,

Among them, China continued to rank as the largest user of the PCT system with total applications of 68,720; followed by the U.S. with 59,230 applications; Japan's applications amounted to 50,520; South Korea's applications amounted to 20,060; and Germany's applications amounted to 18,643. There were strong numbers of international patent applications in other countries as well, including Saudi Arabia (956 applications), Malaysia (255 applications), Chile (262 applications), Singapore (1,278 applications), and Brazil (697 applications). 151 In the context of company-specific patent applications, in 2020 China's "Huawei Technologies Co., Ltd. became the largest applicant in the PCT system with 5,464 applications for the fourth consecutive year." ¹⁵² Following Huawei are South Korea's Samsung Electronics (3,093 applications), Japan's Mitsubishi Electric Corporation (2,810 applications), South Korea's LG Electronics (2,759 applications) and Qualcomm (2,173 applications). 153

However, the quality of China's patents has been deemed low, ¹⁵⁴ or the "soft belly of the seeming patent giant of China." ¹⁵⁵ In fact, some critics even claim these patents are worthless. ¹⁵⁶ A reported nine in ten patents lapse in the application stage. ¹⁵⁷ It is inaccurate to only use patent application numbers to measure the value of patents and the strength of innovation, because it is also closely related to patent types, patent licenses, and international patent applications. Generally, patents are divided into three categories: invention patents, design patents, and utility model patents. ¹⁵⁸ "Among them, the value of invention patents

^{0506/}c1002-32095589.html.

¹⁵⁰ Press Release, WIPO, *supra* note 149.

¹⁵¹ Id.

¹⁵² Yang Haiquan (楊海泉), Zhongguo Guoji Zhuanli Shenqing Liang Shijie Di Yi (中國國際專利申請量世界第一) [China's Number of International Patent Applications Ranks First in The World], Zhengfu Wangluo (政府网) [GOV.CN] (Mar. 3, 2021, 8:25 AM), http://www.gov.cn/xinwen/2021-03/03/content_5589856.htm.

153 Id

¹⁵⁴ Hefa Song & Zhenxing Li, Patent Quality and the Measuring Indicator System: Comparison Among China's Provinces and Key Countries (2014), https://www.law.berkeley.edu/files/Song_Hefa_IPSC_paper_2014.pdf.

¹⁵⁵ See He, supra note 145.

¹⁵⁶ See Lulu Yilun Chen, China Claims More Patents Than Any Country—Most Are Worthless, Bloomberg, (Oct. 3, 2018, 9:13 PM), https://www.bloomberg.com/news/articles/2018-09-26/china-claims-more-patents-than-any-country-most-are-worthless.

¹⁵⁷ *Id*.

¹⁵⁸ Sun Yongjie (孫永傑), Guang You Shuliang Shi Bugou De: Zhongguo Zhuanli Shenqing Liang Yi Chengwei Shijie Di Yi De Lengku Siwei (光有數量是不夠的:中國專利申請量已成為世界第一的冷酷思維) [Quantity Alone is Not Enough: The Cold Thinking that the Number of Patent Applications in China has

is much higher than the other two types of patents, and they are also more representative of innovation strength."¹⁵⁹

According to statistical analysis of patent applications in the U.S., the United Kingdom, Japan, France, and Germany from 1978 to 2017 by Chinese patent data, 90.43% of the patent applications in the U.S. are invention patents, 72.27% are invention patents in the United Kingdom, 82.92% in Japan, 68.81% in France, and 80.5% in Germany. However, the invention patents in China only accounted for 35.53%, and invalid patents accounted for 48.75% of all patents. 161

Nevertheless, China still leads in absolute numbers of patent WIPO's 2020 World Intellectual Property Indicators Report covers more than 150 countries and regions around the world. 162 According to this report, in 2019 SIPO received 1.4 million patent applications, a decrease of 9.2% compared with 2018. 163 This is the first decline in the past twenty-four years, 164 mainly as a result of China's regulatory transformation to optimize the application structure and improve the application quality. 165 Although the worldwide actual number of patent applications has decreased, China received the highest number of applications in the world—more than twice the number of 621,453 applications received by the U.S., the country with the second highest number. 166 Japan, South Korea, and Europe ranked third to fifth with 307,969, 218,975, and 181,479 applications, respectively. 167 The applications received by China, U.S., Japan, South Korea, and Europe combined accounted for 84.7% of the global total in 2019. The 2020 World Intellectual Property Indicators Report observed that:

[F]iling patent applications abroad is a major signal of intention to expand the market overseas. In 2019, U.S. residents filed a total of 236,032 equivalent patent applications overseas, and continued to maintain a world-leading position in this field, followed by Japan (206,758), Germany (104,736), China (84,279 cases)

Become Number One in the World], Tai Jiezhi (鈦介質) [TMTPOST] (Apr. 10, 2020), https://www.tmtpost.com/4308716.html.

¹⁵⁹ *Id*.

¹⁶⁰ *Id*.

¹⁶¹ *Id*.

¹⁶² See generally WIPO, WORLD INTELLECTUAL PROPERTY INDICATORS 2020 (2020), https://www.wipo.int/edocs/pubdocs/en/wipo pub 941 2020.pdf.

¹⁶³ *Id.* at 7.

¹⁶⁴ *Id.* at 13.

¹⁶⁵ *Id.* at 5.

¹⁶⁶ *Id.* at 12.

¹⁶⁷ *Id*.

¹⁶⁸ *Id*.

and South Korea (76,824 cases).¹⁶⁹

Finally, regarding IP rights related to patents, "according to statistics from the Ministry of Commerce, the State Administration of Foreign Exchange and the International Monetary Fund, China's international intellectual property revenue in 2015 was only \$1.08 billion U.S. dollars, while the United States was as high as \$124.67 billion U.S. dollars, 115 times that of China."

China has also proliferated its trademark registration activity: "[I]n 2019, the IP office of China accounted for 55.7% of the annual increase in global trademark filing activity using this measure, albeit down from the exceptionally high shares of between 73% and 84% it comprised each year from 2016 to 2018." China also dominates in industrial designs: "The office of China accounted for 52.3% of designs in applications filed worldwide in 2019, representing 711,617 designs. [The Chinese office] was followed by the European Union Intellectual Property Office (EUIPO) (113,319), the Republic of Korea (69,360), the United States of America (U.S.) (49,848) and Turkey (46,202)." 172

Notwithstanding these impressive numbers that demonstrate creative activity and a culture of filing applications to protect its IP, there are a number of challenges facing China's attempts to prioritize such IP rights protection. First, the country has long enforced capital controls, which restricts the ability of businesses and individuals to transfer funds in and out of the country.¹⁷³ While capital controls may help prevent huge economic swings as investment in China peaks and ebbs, it is not conducive for an environment oriented towards IP rights protections.¹⁷⁴ China's export policy has served as the country's main economic development strategy as it uses market interventions and capital controls to keep its currency undervalued relative to

The string of the Number of Global Applications Drop for the First Time in a Decade], Lianheguo (聯合國) [UNITED NATIONS] (Dec. 7, 2020), https://news.un.org/zh/story/2020/12/1073112.

¹⁷⁰ Yongjie, *supra* note 158.

¹⁷¹ WORLD INTELLECTUAL PROPERTY INDICATORS 2020, *supra* note 162, at 77.

¹⁷³ See Stephen Punwasi, China's Capital Controls Are Working—And That's Bad News for Real Estate Markets That Depend on Chinese Money, Bus. Insider (May 10, 2017, 12:12 PM), http://www.businessinsider.com/capital-controls-stop-mainland-chinese-real-estate-buyers-2017-05.

¹⁷⁴ See id.

fundamentals—at least until recent times. 175

Keeping a low value for the renminbi maintains a low price for Chinese-made goods in other countries. ¹⁷⁶ It also forces increased prices for foreign-made products in China—more than they would otherwise be with a free-floating currency. ¹⁷⁷ In effect, China's government has deliberately reduced the purchasing power of its own consumers in order to subsidize the country's exporters. This policy may not work in a knowledge-based economy that is dependent on extracting rents for innovations outside China, nor will it help the fight against counterfeit copies of foreign products as a low-cost Chinese currency makes foreign luxury goods very expensive and thus prey to piracy. ¹⁷⁸

Second, China's attempts to prioritize IP rights protection is simultaneously undermined by the country's renewed efforts to steal industrial secrets from U.S. corporations.¹⁷⁹ The Commission on the Theft of American Intellectual Property—an independent and bipartisan initiative of leading Americans from the private sector, public sector, national security and foreign affairs, academia, and politics—reported on the surge of research that demonstrates renewed efforts by Chinese authorities and its private sector to steal U.S. IP.¹⁸⁰ The United States Trade Representatives's 2021 Special 301 Report details China's

¹⁷⁵ See World Bank Group [WBG], China Economic Update: Fiscal Policies for Rebalancing 7 (2018), http://pubdocs.worldbank.org/en/917591545 202039807/CEU-Dec-2018-EN.pdf.

¹⁷⁶ See Cong. Rsch. Serv., RL32165, China's Currency: Economic Issues and Options for U.S. Trade Policy 25 (2008); see also Fred Imbert, Trump Accuses China of 'Currency Manipulation' as Yuan Drops to Lowest Level in More than a Decade, CNBC (Aug. 5, 2019, 12:59 PM), https://www.cnbc.com/2019/08/05/trump-accuses-china-of-currency-manipulation-as-yuan-drops-to-new-low.html; Karen Yeung, China Kept on US Currency Manipulator Watch List Amid Sharp Fall in US Dollar-Yuan Exchange Rate, S. China Morning Post (Dec. 17, 2020, 6:01 PM), https://www.scmp.com/economy/china-economy/article/3114365/us-keeps-china-currency-manipulator-watch-list-trade-surplus.

¹⁷⁷ CONG. RSCH. SERV., RL32165, *supra* note 176, at 23.

¹⁷⁸ This began to change at the end of 2015 when the International Monetary Fund designated China's currency a "global reserve currency" after a long-sought process. To get this designation, China had to give up some control over its currency, something that led to an abrupt devaluation of the renminbi over three days that shook global markets in August 2015. Neil Irwin, *The Choice Facing China as Its Currency Becomes More Global*, N.Y. TIMES (Nov. 30, 2015), https://www.nytimes.com/2015/12/01/upshot/the-choice-facing-china-as-its-currency-becomes-more-global.html.

¹⁷⁹ David E. Sanger & Steven Lee Myers, *After a Hiatus, China Accelerates Cyberspying Efforts to Obtain U.S. Technology*, N.Y. TIMES (Nov. 29, 2018), https://www.nytimes.com/2018/11/29/us/politics/china-trump-cyberespionage.html?searchResultPosition=5.

¹⁸⁰ IP COMMISSON 2019 REVIEW, *supra* note 15, at 2.

continued practice of allowing its companies to steal U.S. IP rights.¹⁸¹ In July 2021, the White House, accompanied by allies in the European Union, Australia, Japan, New Zealand, and Canada condemned cyberattacks on Microsoft servers by hackers based in China.¹⁸²

These allegations continue notwithstanding the Chinese government's commitment that protection of foreign IP rights is a priority.¹⁸³ In a keynote speech at the opening of the Second Belt and Road Forum for International Cooperation in April 2019, President Xi promised that China would strengthen the protection of the legitimate rights and interests of foreign IP owners.¹⁸⁴ This promise, along with encouraging foreign investment and purchasing more goods and services from abroad, were part of a new trade deal that negotiators from the U.S. and PRC almost agreed to sign in May of 2019.¹⁸⁵ However, the deal dissolved when Chinese negotiators sent their U.S. counterparts a redrafted agreement, prompting former President Trump to accuse Beijing of reneging on terms that had been settled and ordering the imposition of new tariffs against Chinese goods. 186 Again, President Trump blamed China for violating IP laws.¹⁸⁷

¹⁸¹ U.S. TRADE REPRESENTATIVE, 2021 SPECIAL 301 REPORT 40–49 (2021), https://ustr.gov/sites/default/files/files/reports/2021/2021%20Special%20301%20Report%20(final).pdf.

¹⁸² Press Release, White House, The United States, Joined by Allies and Partners, Attributes Malicious Cyber Activity and Irresponsible State Behavior to the People's Republic of China (July 19, 2021), https://www.whitehouse.gov/briefing-room/statements-releases/2021/07/19/the-united-states-joined-by-allies-and-partners-attributes-malicious-cyber-activity-and-irresponsible-state-behavior-to-the-peoples-republic-of-china/. The European Union did not take the Chinese government to task for these attacks. Stuart Lau, *Europe Joins US to Condemn Cyberattacks from China*, POLITICO (July 19, 2021, 2:29 PM), https://www.politico.eu/article/europe-us-condemnation-china-state-sponsored-cyberattacks/; *see also* Council of the European Union Press Release 615/21, China: Declaration by the High Representative on Behalf of the European Union Urging Chinese Authorities to Take Action Against Malicious Cyber Activities Undertaken from Its Territory (July 19, 2021).

¹⁸³ Mu Xuequan (穆雪泉), Zhongguo Qidong Baohu Waiguo Gongsi Zishi Chanquan De Yundong (中國啟動保護外國公司知識產權的運動) [China Launches Campaign to Protect IPRs of Foreign Companies], Xinhua Wang (新華網) [XINHUANET] (Sept. 19, 2017, 12:25 AM), http://www.xinhuanet.com/english/2017-09/19/c 129707091.htm.

¹⁸⁴ Xi Opens Up New Horizons for High-Quality Belt and Road Cooperation, BEIJING REV. (Apr. 27, 2019), http://www.bjreview.com/World/201904/t20190427 800166260.html.

¹⁸⁵ Chris Buckley & Keith Bradsher, *How Xi's Last-Minute Switch on U.S.-China Trade Deal Upended It*, N.Y. TIMES (May 16, 2019), https://www.nytimes.com/2019/05/16/world/asia/trade-xi-jinping-trump-china-united-states.html?action=click&module=Top%20Stories&pgtype=Homepage.

¹⁸⁶ *Id*.

¹⁸⁷ *Id*.

The theft of U.S. IP became the justification for the tariff war in which the U.S. and China engaged in 2018 and 2019.¹⁸⁸ These issues were not resolved by the January 2020 trade deal between the U.S. and China.¹⁸⁹ Phase I of a January 2020 Trade Agreement only reversed some of the tariffs that each country imposed on the other since 2017.¹⁹⁰ The tariffs on \$120 billion of Chinese goods are to be halved to 7.5% and new tariffs will be suspended.¹⁹¹ But not all new tariffs will be deferred. In fact, U.S. tariffs on \$370 billion worth of goods, three-quarters of the total amount of U.S. tariffs imposed, remain in place.¹⁹² The deal did commit China to purchasing many more U.S. agricultural goods going forward, ¹⁹³ a great benefit for America's agricultural sector. While such purchase promises from China have been largely unfulfilled, ¹⁹⁴ the deal helped the trading partners move back towards pre-trade war economic relations to some extent. ¹⁹⁵

Phase I of the January 2020 trade deal between the two countries

¹⁸⁸ See Saleha Mohsin et al., Trump, Xi Agree to Temporary Truce in Bid to Contain Trade War, BLOOMBERG (Dec. 2, 2018, 6:48 AM), https://www.bloomberg.com/news/articles/2018-12-01/trump-opens-dinner-china-s-xi-with-truce-in-trade-war-at-stake; see also Kevin Breuninger & Javier E. David, US Will Hold Off on Raising China Tariffs to 25% as Trump and Xi Agree to a 90-day Trade Truce, CNBC (Dec. 3, 2018, 7:26 AM), https://www.cnbc.com/2018/12/01/us-china-wont-impose-additional-tariffs-after-january-1-report.html.

¹⁸⁹ See Ryan Hass & Abraham Denmark, More Pain than Gain: How the US-China Trade War Hurt America, BROOKINGS INST. (Aug. 7, 2020), https://www.brookings.edu/blog/order-from-chaos/2020/08/07/more-pain-than-gain-how-the-us-china-trade-war-hurt-america/.

¹⁹⁰ James Cooper, *Why New Trade Deals Are No Panaceas*, SAN DIEGO UNION-TRIB. (Jan. 23, 2020, 4:30 PM), https://www.sandiegouniontribune.com/opinion/commentary/story/2020-01-23/commentary-why-new-trade-deals-are-no-panaceas; *see also* Matthew Goodman et al., *What's Inside the U.S.-China Phase One Deal?*, CTR. FOR STRATEGIC & INT'L STUD. (Jan. 15, 2020), https://www.csis.org/analysis/whats-inside-us-china-phase-one-deal.

¹⁹¹ What's in the U.S.-China Phase 1 Trade Deal, REUTERS (Jan. 15, 2020, 1:16 PM), https://www.reuters.com/article/us-usa-trade-china-details-factbox/whats-in-the-u-s-china-phase-1-trade-deal-idUSKBN1ZE2IF.

¹⁹² VIRGIL BISIO ET AL., U.S.-CHINA ECON. & SEC. REV. COMM'N , THE U.S.-CHINA "PHASE ONE" DEAL: A BACKGROUNDER 2 (Feb. 4, 2020), https://www.uscc.gov/sites/default/files/2020-02/U.S.-China%20Trade%20Deal%20 Issue%20Brief.pdf.

 $^{^{193}}$ *Id.* at 3.

¹⁹⁴ See Brad W. Setser & Dylan Yalbir, *Slouching Toward Phase One*, COUNCIL ON FOREIGN RELS. (July 8, 2020, 12:24 AM), https://www.cfr.org/blog/slouching-toward-phase-one.

¹⁹⁵ See Yen Nee Lee, 3 Charts Show China is Far from Meeting Its 'Phase One' Trade Commitment to the U.S., CNBC (Aug. 12, 2020, 11:06 PM), https://www.cnbc.com/2020/08/13/chinas-progress-in-buying-us-goods-under-phase-one-trade-deal-in-charts.html.

also did not address IP rights violations. ¹⁹⁶ Instead, it was left to a Phase II, a deal which never materialized during the Trump administration. ¹⁹⁷ Phase II was stillborn so the real structural and difficult issues ¹⁹⁸—including IP protections—that have rankled the U.S. government and its corporations for years remain unresolved. ¹⁹⁹ China's state subsidies for its massive technology companies, like Tencent, Huawei and Baidu²⁰⁰ have long been a bone in the throat of Washington, D.C., and U.S-based Big Tech. ²⁰¹ With no Phase II, Beijing can continue its economic, military, and political support of its state-owned enterprises, ensuring its dominance over emerging technologies. ²⁰² Currently, the great decoupling of the two global superpowers is underway. ²⁰³ The global supply chain—including the cheap Chinese parts on which U.S. technology manufacturing relies—is being disrupted and global trade

¹⁹⁶ See David Lawder, U.S. Says China has Fallen Short on 'Phase 1' Intellectual Property Commitments, REUTERS (Apr. 30, 2021, 12:44 PM), https://www.reuters.com/business/us-says-china-has-fallen-short-phase-1-intellectual-property-commitments-2021-04-30/.

¹⁹⁷ The USTR's 2021 Special 301 Report states that "China has made enforceable commitments to address forced technology transfer in the Phase One Agreement[,]" but not to the actual substance. 2021 SPECIAL 301 REPORT, *supra* note 183, at 24.

¹⁹⁸ See Jennifer Jacobs, *Trump Says Phase 2 China Trade Deal Unlikely at this Point*, BLOOMBERG (July 10, 2020, 1:04 PM), https://www.bloomberg.com/news/articles/2020-07-10/trump-says-phase-2-china-trade-deal-unlikely-at-this-point.

¹⁹⁹ Kevin Breuninger, *Trump Says U.S.-China Relationship Is 'Severely Damaged,' Phase 2 Trade Deal Not a Priority*, CNBC (July 10, 2020, 3:10 PM), https://www.cnbc.com/2020/07/10/trump-says-us-china-relationship-damaged-phase-2-trade-deal-not-a-priority.html (stating the Phase I deal only took initial steps toward addressing intellectual property protections and forced technology transfer issues).

²⁰⁰ See Amir Guluzade, *The Role of China's State-Owned Companies Explained*, WORLD ECON. F. (May 7, 2019), https://www.weforum.org/agenda/2019/05/whychinas-state-owned-companies-still-have-a-key-role-to-play/.

²⁰¹ See Greg Ip, 'Industrial Policy' Is Back: The West Dusts Off Old Idea to Counter China, WALL ST. J. (July 29, 2021, 9:41 AM), https://www.wsj.com/articles/subsidies-chips-china-state-aid-biden-11627565906.

Zoe Xi Signals Unshaken Commitment to State's Role in Chinese Economy, MERICS (Aug. 27, 2020), https://merics.org/en/newsletter/xi-signals-unshaken-commitment-states-role-chinese-economy. See generally Zhongguo Qiye Zai "Yidai Yilu" Changyi Zhong Zuole Shenme? (中國企業在"一帶一路"倡議中做了什麼?) [What are Chinese Companies Doing in the Belt and Road Initiative?], Xinhua sichou zhi lu (新華絲綢之路) [Xinhua Silk Road] (Oct. 12, 2017, 2:41 PM), http://silkroad.news.cn/zhiku/mfbg/55229.shtml ("[I]n the ranking of the influence of Chinese enterprises in the construction of the 'Belt and Road,' central enterprises accounted for 36%, local state-owned enterprises accounted for 20%, private enterprises accounted for 42%, and joint ventures accounted for 2%.").

²⁰³ James Cooper, *That Decoupling Sound: China, the US and a Year of CBDCs*, COINDESK: OP. (Dec. 28, 2020, 1:42 PM), https://old.coindesk.com/decoupling-sound-china-cbdcs.

braces for more shocks as relations between the two competitors strain.²⁰⁴

At the week-long 19th National Congress of the Communist Party of China in 2017, ²⁰⁵ President Xi Jinping declared a "new era" of Chinese socialism. ²⁰⁶ In this "new era," the principal contradiction facing China is "between unbalanced and inadequate development and the people's ever-growing needs for a better life. That indicates the country will not only continue its economic development but also pay more attention to its social development." As he hailed the "China Dream," President Xi Jinping warned achieving it would be "no walk in the park." He then outlined the Party's priorities for the next five years. ²⁰⁹ Among the various goals the country has to achieve within that timeframe, President Xi Jinping emphasized the urgency of establishing an innovative and creative country. ²¹⁰

V. CONCLUSION

With China building its IP portfolio and infrastructure to protect it, it is important to remember that China first used marks to designate the origin of goods 3,000 years when marks were placed on pottery.²¹¹

[C]hina had seals and imprints on pottery as early as the Warring States Period. The embryonic form of this trademark was 800 years earlier than the earliest record in the West (1040). "Guo Yan" on Gongding (pottery) unearthed in the Southern and Northern

²⁰⁴ *Id*.

²⁰⁵ See Katie Hunt, China's 19th Party Congress: What You Need to Know, CNN (Oct. 17, 2017, 12:36 AM), http://www.cnn.com/2017/10/17/asia/china-party-congress-what-you-need-to-know/index.html.

²⁰⁶ See Zhongwen Shuyu: Xin Shidai (中文術語:新時代) [Chinese Terminology: New Era], Zhengfu Wangluo (政府网) [GOV.CN] (Oct. 22, 2017, 10:42 AM), http://english.gov.cn/news/video/2017/10/22/content_281475916983216.htm.

²⁰⁸ Tom Phillips, *Xi Jinping Heralds 'New Era' of Chinese Power at Communist Party Congress*, GUARDIAN (Oct. 18, 2017, 12:54 AM), https://www.theguardian.com/world/2017/oct/18/xi-jinping-speech-new-era-chinese-power-party-congress.

²⁰⁹ *Id*.

²¹⁰ Xijinping: Juesheng Quanmian Jiancheng Xiaokang Shehui Zhengqu Xin Shidai Zhongguo Tese Shehui Zhuyi Weida Shengli (習近平:決勝全面建成小康社會 爭取新時代中國特色社會主義偉大勝利) [Xi Jinping: Secure a Decisive Victory in Building a Moderately Prosperous Society in All Respects and Strive for the Great Success of Socialism with Chinese Characteristics for a New Era], Xinhua Wang (新華網) [XINHUANET] (Oct. 27, 2017, 7:27 PM), http://news.xinhuanet.com/politics/19cpcnc/2017-10/27/c_1121867529 .htm.

²¹¹ In its advanced ancient civilization,

Currently, due to several moving parts in China such as the BRI, the emerging consumer society, and the transition to a knowledge-based economy, protecting IP rights has become increasingly important.

By protecting IP rights, the Chinese government and its regulators will provide a steady stream of revenue for rightsholders, an attendant stream of tax revenue for the government itself, and continued incentives for further R&D that will contribute to the knowledge-economy comparative advantage that China is sure to gain in the future. According to Xinhua News Agency, China will improve IP protection for foreign companies by launching campaigns against violations and stepping up judicial and administrative protection. This in turn fuels a consumer society that benefits from innovation in two ways: (1) innovators profit from their labor and (2) consumers are able to use technologies derived from IP rights. Chinese society is further benefited through the enjoyment of legitimate—rather than pirated—products that are safe to use.

The BRI is poised to bring significant infrastructure growth to China and its trading and investment partners in the coming years. Because of this, it is imperative that IP rights that result from the BRI are strongly protected by China. IP rights will play an important role for China in the transition towards a post-industrial, knowledge-based economy to protect R&D and ensure a stable, steady stream of revenue. Furthermore, significant protection of IP rights will boost China's emerging consumer society. The correlation between strong IP protection and strong developed economies adds to the importance that China act now rather than leaving IP protection on the backburner.

Dynasties is a more clear example of the use of trademarks. Of course, the most frequently cited is the "White Rabbit" trademark of Liujiazhen Shop in Jinan, Shandong Province during the Northern Song Dynasty. It not only has the white rabbit pattern holding the medicine pestle, but also the words "Recognize the white rabbit in front of the door as a mark[.]"

Ma Xiurong (馬秀榮), Shijie Shangbiao Fa De Fazhan (世界商標法的發展) [The Development of World Trademark Law], Zhongguo Fayuan Wangzhan (中國法院網站) [BJGY CHINA COURT GOV.CN] (Dec. 26, 2003, 8:39 AM), https://bjgy.chinacourt.gov.cn/article/detail/2003/12/id/823237.shtml.

²¹² Mu Xuequan (穆雪泉), Zhongguo Qidong Baohu Waiguo Gongsi Zishi Chanquan De Yundong (中國啟動保護外國公司知識產權的運動) [China Launches Campaign to Protect IPRs of Foreign Companies], Xinhua Wang (新華網) [XINHUANET] (Sept. 19, 2017, 12:25 AM), http://www.xinhuanet.com/english/2017-09/19/c 129707091.htm.